

# GLASS PATTERNS

— • Q U A R T E R L Y™ • —

Winter 2019

Volume 35 • No. 4

## Wildlife & Landscapes Issue



*Lisa Vogt*

Volume 35 No. 4

\$6.00 U.S. \$7.50 Canada



www.GlassPatterns.com

**18** Stained Glass  
& Kiln Projects

**DON'T MISS Our 16-Page Pattern Sheet**

Ideas...

# Amplified



## Blue Ribbon Livin'

2013

14 ft. x 10 ft.

Kiln-formed glass, aluminum and copper  
Washington State Arts Commission  
in partnership with Valley School District



## The Artist

**Michael Dupille** is one of the early pioneers in the kiln formed art glass movement that began in the 1980s. He creates large scale pieces as murals or individual elements using fused crushed glass. He calls his style "Soft Surrealism" due to its representational imagery that incorporates imaginative twists to embellish the narrative. Find out more about Michael and his work at: [www.skutt.com/Dupille](http://www.skutt.com/Dupille)



## The Kiln

*"I love my GM1414! I have used them for years in my workshops, and other studio environments. They are well built, dependable workhorses with some great features. I do a variety of kiln forming techniques as well as production work and the size, depth and versatility of this model allow me to realize nearly all of what I set out to accomplish."*



# SKUTT

**We help you make  
great things!**





**6** 3-D Winter Icicles  
An Introduction to Stained Glass  
*Design by Lidia K. Anderson*

**10** Scenic Overlook  
*Design by Mary Harris*

**12** Sweet Heart  
*Design by Leslie Gibbs*

**16** Flying Duck  
*Design by Jean Beaulieu*

**18** Glendalough  
A Legendary Irish Landscape  
*Design by David Kennedy*

**22** Funky Frannie  
*Design by Pat Chase*

**24** Swallowtail  
*Design by Justin Behnke*

**28** Prairie Style Snowflake  
*Design by Chantal Paré*

**32** Orchids  
*Design by Terra Parma*

**33–48** 16-Page Full-Size Pattern Section

**49** Buzzy Beehive  
*Design by Paned Expressions Studios*

**50** Cardinal in a Pine Tree  
*Design by Lisa Vogt*

*Above: Prairie Style Snowflake by Chantal Paré.  
On the Cover: Cardinal in a Pine Tree by Lisa Vogt.*

# Glass Patterns Quarterly™

## Table of Contents

Winter 2019

Volume 35 Number 4



Active and  
Voting  
Members of



Connect With Us



**Publisher** ~ Maureen James

**Graphic Artists** ~ Dave Burnett,  
Mark Waterbury

**Accounting** ~ Rhonda Sewell

**Circulation Manager** ~ Kathy Gentry

**Copy Editor** ~ Darlene Welch

**Advertising** ~ Maureen James

**Contributing Designers and Writers**

Lidia K. Anderson, Justin Behnke

Jean Beaulieu, Dennis Brady

Pat Chase, Cindy Dow Savary

Leslie Gibbs, Mary Harris

Arnold Howard, David Kennedy

Jane McClarren, Susan McGarry

Paned Expressions Studios

Chantal Paré, Terra Parma

Alysa Phiel, Lisa Stirrett

Lisa Vogt, Darlene Welch

**GLASS PATTERNS QUARTERLY™**

Issn 1041-6684, is published quarterly

by Glass Patterns Quarterly, Inc.

8300 Hidden Valley Road,

P.O. Box 69, Westport, KY 40077

**POSTMASTER** Send address

changes to *Glass Patterns Quarterly™*,

8300 Hidden Valley Road,

P.O. Box 69, Westport, KY 40077

**Telephone** 502-222-5631

**E-Mail** info@glasspatterns.com

**Graphic Transfer**

info@glasspatterns.com

**Website** GlassPatterns.com

**Subscriptions** \$24 for one year,

\$43 for two years, and \$61 for three years

Sample issues U.S., \$8 Outside U.S., \$12

Sample issues Airmail, \$14

Kentucky residents, add 6% state sales tax.

Outside the U.S., add \$5 per year

for international postage.

All subscriptions must be paid in

U.S. dollars with an international

money order or with a check drawn

on a U.S. bank.

Periodicals Postage Paid

at Westport, KY 40077 and additional

mailing offices. Back issues \$6

plus shipping and handling.

©2019 Glass Patterns Quarterly, Inc.

*Glass Patterns Quarterly™* does not stand  
sponsorship for opinions or facts of authors.

Unsolicited material will be handled with

care, but the magazine assumes

no responsibility for it.

**54 Kiln Corner**  
**Simple Thermocouple Repairs**  
*by Arnold Howard*

**56 Sparkling Snowflake**  
*Design by Alysa Phiel*

**60 Swizzle Stix Puzzle Pendant**  
*Design by Susan McGarry*

**62 What's New**

**64 Amaryllis**  
*Design by Chantal Paré*

**68 Starfish Reactive Tray**  
*Design by Lisa Stirrett*

**72 Embossed Glass**  
**Choosing Your Own Drawing to**  
**Create Personalized Glass Art**  
*Design by Dennis Brady*

**74 Getting It All Together**  
**Tips for Making an Adjustable**  
**Tool Organizer**  
*Design by Susan McGarry*

**76 Stained Glass Supply Shops**

**78 Advertiser Index**



Above: Amaryllis by Chantal Paré

#### Upcoming Submission Deadlines

**Summer 2020 Garden, Beach, and Nostalgia**

Editorial February 20, 2020

Ad Closing April 20, 2020

Ad Materials April 30, 2020

**Fall 2020 Autumn, Halloween, Holiday and Christmas Ornaments**

Editorial May 20, 2020

Ad Closing July 20, 2020

Ad Materials July 30, 2020



# HAKKO

# FX-601

## ADJUSTABLE TEMPERATURE CONTROL

The FX-601 is the #1 preferred soldering iron for stained glass by most stained glass artisans. It is ideal for all your stained glass soldering applications, from small decorative projects to window panes.

- **NO RHEOSTAT NEEDED!**
- "Electronic" temperature control
- Dial the temperature you want
- Temperature range: 464° to 1004°F
- Ceramic heating element
- Temperature control sensor in heater ensures consistent heat
- Efficient heating = less watts needed
- FAST thermal recovery
- Lightweight (only 2.4oz w/o cord)
- Slender, well-balanced handpiece
- Durable strain relief
- 3-wire (grounded) power cord
- Extra long 6 ft. power cord
- MET Approved
- HAKKO P/N: FX601-02/P

Actual Size



## HEAT RESISTANT SOLDERING MAT

This mat is the perfect work surface for stained glass and decorative soldering projects, which protects your work bench from solder, flux, and other chemicals. Made from all-natural rubber, the mat's smooth, matte surface is easy to clean, lessens glare, and features a non-skid backing that reduces unwanted sliding or movement.

- 24"W x 16"H
- 2-layer heat and burn resistant natural rubber
- Heat resistant up to 600°F
- Solder spatter can be brushed off easily
- HAKKO P/N: SC-1003-SG



For more information, including tips and accessories, visit [HakkoStainedGlass.com](http://HakkoStainedGlass.com)

# 3-D Winter Icicles

## An Introduction to Stained Glass

*Design, Demonstration, and Text by Lidia K. Anderson*



I love the smell of the crisp air in winter, watching the snow fall and seeing the icicles dripping from the rooftop. Having spent my childhood in Sydney, Australia, my holidays were spent on the beach in the hottest time of the summer. Celebrating the holidays during the winter here in the United States was hard to get used to, but a welcome change. This is a very simple project, so make several different sizes and textures to create a winter wonderland decoration.

### **Glass**

Clear Glass, Scrap

Textured Glass, Scrap

### **Tools and Materials**

Black Marker 60/40 Solder

Temp-Controlled Soldering Iron

Flux 7/32" Silver-Backed Foil

Polishing Compound Jump Rings

Thin Transparent Fishing Line

Crystal Bead (optional)

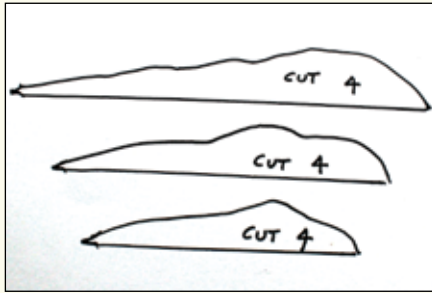
Fishing Swivel Hooks (optional)

Jewelry Headpin (optional)



1

Cut out the pattern pieces and trace them onto the glass using a black marker.



2

Cut out the glass pieces, 4 sides per size, as many as you want to make.



Grind, wash, dry, foil, and burnish all of the pieces.

3

Flux all of the pieces, then tin-solder the fronts, backs, and edges.



4

Arrange 2 pieces with the straight sides together.



5

Flux and solder down the center seam, front and back.



Don't apply any beading, since the piece needs to remain flat.

6

Solder a jump ring to the icicle for hanging.



Open up a jump ring and attach it to the swivel hook (optional), close the jump ring with pliers, and solder it to the top point of the icicle where the two pieces of glass meet. If you plan to add a crystal drop to the icicle, solder an additional jump ring to the bottom point.

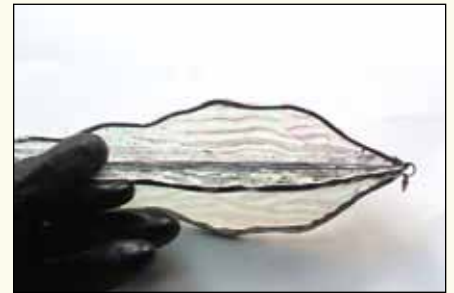
7

Line up another icicle piece at right angles to the base and tack-solder the piece at the top and bottom.



8

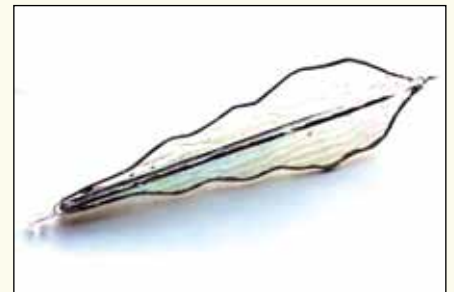
Turn the icicle over and repeat step 7 with the last icicle piece, then bead all of the edges.



Solder in between the seams for stability, then turn down the temperature of the soldering iron and apply a nice bead to the edges. Wash, dry, and polish your assembled piece.

9

Use thin, transparent fishing line for hanging the icicle.



Add the fishing line to the swivel hook, or to the jump ring if not using the swivel, and tie a knot at your desired length. Add the crystal drop bead to the bottom with a jewelry headpin, cut to length, and secure the bead to the bottom jump ring. It should just dangle freely.

Now you're ready to display the icicles on your Christmas tree or hang several at different levels from the top of a window frame. I use a thin drapery tension rod inside the window frame that can be adjusted to any desired level. Happy Holidays. **GPQ**

## Stained Glass Made Easy



**TABLE FOILER**  
Folds Glass—First Class

- Dispenses, applies & crimps foil in one easy process
- Works on all glass sizes & shapes
- Professional results, even for beginners!

**Grinder Cookie**

Great Results without the Grind

- Saves wear & tear on fingers
- More grinding time out of your bit
- Shape allows increased pressure against glass



Ask to see them at  
your favorite retailer!  
Or call 1-800-250-1790  
Now Accepting PayPal

[www.TableFoil.com](http://www.TableFoil.com)



Lidia K. Anderson of L.A. Glass is a native of Sydney, Australia, and it was there that she began her formal education in art. In her second year of college, she moved to the United States and received her BFA from Bowling Green State University in Ohio.

Lidia spent the next ten years as art director in the field of television. Recognizing the stresses of the advertising world, she took the opportunity to find other forms of artistic expression. Her love of glass was born, and she allowed this creative energy to guide her. What evolved were works of art that integrated into a more common understanding of functional living.

The larger body of Lidia's work is represented by some of the finest art galleries in the nation. She has had the privilege of exhibiting with the world-renowned artist, Dale Chihuly, and has also completed a restoration of eighteen stained glass windows at a chapel in Ohio. To view more of her work, visit [www.etsy.com/shop/LAGlass](http://www.etsy.com/shop/LAGlass).

# Glastar

## The Industry Leader Since 1978

GREAT TOOLS, PRODUCT EXPERTISE & CUSTOMER SERVICE YOU CAN ALWAYS COUNT ON.



\*Free 1 oz. EZ-Grind™ Coolant, a Molded Eye Shield, and a Soldering Iron Tip Cleaner from October 15 - December 20 with a Super Star II™ grinder purchase.

We have a wide variety of products, equipment, tools and supplies for your

Glastar Corporation • [glastar.com](http://glastar.com)  
8425 Canoga Ave Canoga Park, CA 91304

Stained Glass needs to help you grow your hobby or business.  
Please visit our website or call your local dealer for more info.

(800)423-5635 • Tel (818)341-0301  
F(818)998-2078 • [info@glastar.com](mailto:info@glastar.com)



## NEW! CABOCHON SNAP & SWITCH



Make your jewelry fit your mood with SNAP & SWITCH! Personalize each day's accessories by the day, minute or hour. Attach the connector to the back of your glass pieces with adhesive, the pop them in and out to suit your mood anytime of the day or night. Modular jewelry for everyone!!

### Necklaces

AANP-01

AANP-02

AANP-13

AANRAKU

### Bracelets

AANP-08

AANP-09

AANP-14

### Ring

AANP-10

### Pendant (without chain)

AANP-11

### Earrings

AANP-12

### Extra Disks

AANP-03  
5 pc./pack

## WINE BOTTLE STOPPERS PURSE HANGERS NEW! EARRING HOOPS



- ITEM# **NICKEL PLATED**  
A. SMT Short Mandrel  
B. RMT Round Top  
C. FMT Flat Top  
ITEM# **STAINLESS STEEL**  
A. SMT-SS Short Mandrel  
B. RMT-SS Round Top  
C. FMT-SS Flat Top



### KEY HOLDERS

- A. KH Original Round  
B. RKH Round Flat  
C. FKH Flat



AANP-05  
24 pc./pack

### DISPLAY STAND for Glass Beads



SPBSB  
1.5"W x 3"H

### TEA SERVER

TTT2 Tea Server Extension Kit  
TTT1



SQBL



SQBM



SQBS

### SQUARE BOXES

In Medium Cherry finish  
SQBL 9.5" Sq., Glass Size 8"  
SQBM 7.5" Sq., Glass Size 6"  
SQBS 5.5" Sq., Glass Size 3 1/4"

### BOOKMARKS

A. FBM Flat Top  
B. RBM Round Top



## TWOFERS™ Grinder Bits 2 for the price of ONE

- GB10SB60 1" Coarse 60  
GB10R100 1" Regular 100/120  
GB10M170 1" Medium 170  
GB10F220 1" Fine 220  
GB10UF600 1" Ultra Fine 600  
GB34SB60 3/4" Coarse 60  
GB34R100 3/4" Regular 100/120  
GB34M170 3/4" Medium 170  
GB34F220 3/4" Fine 220  
GB34UF600 3/4" Ultra Fine 600

- GB14R 1/4" Regular 100/120  
GB18R 1/8" Regular 100/120  
GB38R 3/8" Regular 100/120  
GBJB Jewelry Bits  
GBRB Ripple Bits  
DB18 1/8" Core Bits



## AANRAKU® GENUINE JEWELRY BAILS

### Leaf Bails



- ITEM# **NICKEL PLATED**  
NJBLS Large  
NJBLS Small  
ITEM# **SILVER PLATED**  
SLBLS Large  
SLBLS Medium  
SLBLS Small

### Heart Bails



- ITEM# **GOLD PLATED**  
SHBLS Large  
SHBLS Medium  
SHBLS Small  
ITEM# **SILVER PLATED**  
SHBLS Large  
SHBLS Medium  
SHBLS Small  
ITEM# **GOLD PLATED**  
GHBLS Large  
GHBLS Medium  
GHBLS Small

### Earring Bails



- ITEM# **SILVER PLATED**  
SEBS Large  
SEBS Medium  
SEBS Small  
ITEM# **GOLD PLATED**  
GEBS Large  
GEBS Medium  
GEBS Small  
ITEM# **SILVER PLATED**  
HEBS Large  
HEBS Medium  
HEBS Small  
ITEM# **GOLD PLATED**  
HEBS Large  
HEBS Medium  
HEBS Small

### Pattern Bails



- ITEM# **SILVER PLATED**  
A. SPBL-5 Hexagon  
B. SPBL-H Hashmark  
C. SPBL-L Leaves  
D. SPBL-T Tortoise  
E. SPBL-W Waves  
SPBL-A Assorted (5 in 1)

### New Design Bails



- ITEM# **SILVER PLATED**  
A. SFBS Fish  
B. SCBS Celtic  
C. SPBS Paw

### GRINDER'S MATE

Makes glass grinding a pleasure instead of a chore. Say goodbye to sore and painful fingers FOREVER!

NGM



### FRIT MAKER

FM1



### FRIT SIFTERS



### LEATHER CORDS

Available in 3 Sizes

- LC16 16"  
LC18 18"  
LC20 20"

With 2" extender chain



Ask for them at your local supplier

41 S. Railroad Ave. San Mateo CA 94401-3209 Tel. (650) 372-0527 Fax. (650) 372-0566 www.abasg.com

\*Aanraku®, its logomark and ® are registered trademarks of Aanraku Glass Studios. All rights reserved.



# Scenic Overlook

*Design by Mary Harris, Text by Darlene Welch*



Mule deer are among the most beloved and iconic wildlife of the American West. This 48" x 25" stained glass design by Mary Harris captures the handsome appearance of this deer as he surveys his surroundings. The sky in this rendering has been altered by slightly decreasing the number of separate glass pieces. When compared with Mary's original pattern, which is included in the pullout pattern section, it can give glass artists a chance to see how patterns can be customized to suit their own preferences.

Mary has been creating traditional and innovative stained glass art since 1979. Her true-to-life style has evolved through drawing and implementing custom patterns in stained glass and sandblasting. She has also created pattern books and discovered new ways to master brilliant artwork by merging traditional and hot glass techniques. The artist continues to create unique and stunning pieces that have been recognized for many years by the Association of Stained Glass Lamp Artists and in the Gallery of Excellence at the Las Vegas Glass Craft & Bead Expo. Visit [www.harrisartglass.com](http://www.harrisartglass.com) to find out more about Mary and her work. **GPQ**

## **Wissmach Glass Company**

- 71-L Dark Brown/Green/Light Blue/Light Opal/Crystal for Deer Body, 1-1/2 Sq. Ft.
- 503-L Light Opal/Dark Gray/Brown for Deer Legs, Rump, and Face, Scrap
- 145-SP Dark Amber/Opal/Crystal for Antlers, Scrap
- 77-L Light Brown/Yellow Green/Light Opal for Antlers, Scrap
- 78-L Medium Amber/Green/Light Opal/Crystal for Landscape, 2 Sq. Ft.
- 61-L Green/Brown/Light Opal/Crystal for Landscape, Scrap
- 245-L Medium Amber/True Green Streaky/Light Opal/Crystal for Landscape, Scrap
- WO-59 Dark Brown/Green/Opal/Crystal Wispy for Landscape, Scrap
- 155-LL Dark Purple/Green/Light Opal/Crystal Streaky for Tree Trunk, Scrap
- 23-L Light Green Light Opal/Copper Red for Tree Tops, 1 Sq. Ft.
- WO-112 Dark Green/Dark Amber/Opal Wispy for Tree Tops, 1 Sq. Ft.
- 238-D Dark Purple/Dark Blue/Dense Opal/Crystal for Sky, 3-1/2 Sq. Ft.

## **Tools and Materials**

- 7/32" Copper Foil Flux Solder
- Black Patina 1/4" U-Channel Lead

© Copyright 2019 by Glass Patterns Quarterly™. All rights reserved.





# Anything in Stained Glass

Family Owned Since 1979, Knowledgeable & Friendly Staff,  
Exceptional Prices for Glass/Supplies,  
and an Excellent Shipping Crew!

Together Let's  
**Create Anything!**

(800) 462-1209 Find us on:     
Frederick, MD [www.anythinginstainedglass.com](http://www.anythinginstainedglass.com)

Choose the  
glass saw that's  
right for  
**YOU!**



## Ring Saw

**Gryphon Zephyr+**

Two 7" blades included • Less maintenance



Gryphon Corporation  
Our 57th Year!  
[www.gryphoncorp.com](http://www.gryphoncorp.com)



## Wire Saw

**Gryphon Omni 2+**

Most reliable /least expensive operation  
Six blades included



## Band Saw

**Gryphon C-40**

Now available in a new taller version  
ideal for cutting bottles

*Compare all the features at your dealer or on our website*

# Sweet Heart

*Design, Fabrication, and Text by Leslie Gibbs*

Photography by Jon Gibbs



The hummingbird, smallest of all birds, symbolizes love, beauty, hope, and the enjoyment of life. There are more than 325 unique species of hummingbirds. They are typically only three to five inches in size, although some species are no larger than a bumblebee. These fascinating birds also have an amazing ability that enables them to hover and fly backwards, or even upside down!

We are enchanted with this tiny messenger of joy, since the brilliant colors and iridescence of its feathers make the hummingbird the perfect subject for glass artists. Spread your wings, let your spirit soar, and celebrate life's sweet moments with the delight that this panel will bring you or someone you love.

## Glass

Light Green Iridescent  
for Wings, Back, and Top of Head, 3" x 5"  
Cranberry Pink for Throat, 2" x 3"  
Light Aquamarine Blue for Background, 4" x 4"  
Mint Green Streaky for Chest, 3" x 5"

## Coatings By Sandberg

Green/Pink Thin Dichroic for Feathered Wings, 3" x 7"

## Tools and Materials

X-Acto® Knife   Scissors  
5/32" and 3/16" Silver-Backed Copper Foil  
Masking Tape   Black Patina  
Kem-O-Pro® Polishing Wax  
Cotton Swabs   Toothpicks  
Soft Cleaning and Polishing Cloths  
1/4" and 1" Grinding Bits  
Waterproof Marking Pen  
Small Jump Rings for Hanging  
Flux   Flux Remover  
Needle Nose Pliers   Old Toothbrush  
White Enamel Hobby Paint

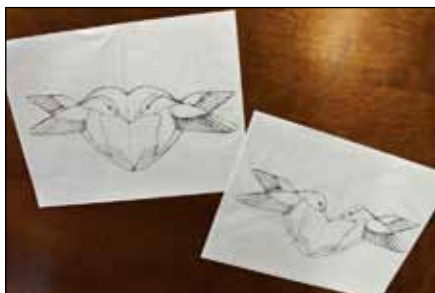
## Optional Materials

Crystal for Hanging   Fine Steel Wool  
Beadlon® Supplemax™ Nylon Line 0.25 mm



Decide how large you want to fabricate the design and make two copies of the pattern.

1



Number each section of the design.

2

Cut out all sections of the glass.



For the feathers, you can use iridized glass if you don't want to use dichroic. If you do choose dichroic, however, remember to cut it on the back of the glass, not the treated side. With the thin dichroic, you can just lay the glass on top of the feather section, outline and number the feathers, then flip the glass over to cut. This will give you a precise cut and reduce the amount of grinding necessary.

3

Grind the glass to fit the pattern.

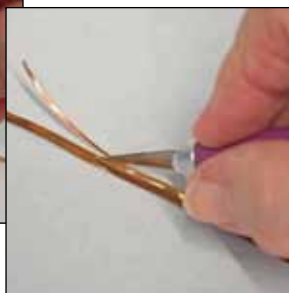


When grinding dichroic glass you will want to protect it, since it scratches easily. I do this by having a clean grinder surface and covering the grinding surface with masking tape. Grind the rest of the glass sections normally, then clean the glass and set the pieces aside for foiling.

4



Foil each section of glass, trimming the width of the foil if necessary.



If you have chosen the thin dichroic for the feathers, use the smaller width of foil. Even with the smaller width, however, you will probably need to trim the foil with scissors and an X-Acto knife. You may hate me for this tedious job, but audio books, music, or Netflix can make this chore easier.

5

Secure the foiled wing and tail sections before soldering.



In order to secure the tiny feather sections and keep them from shifting during soldering, tape the wing and tail sections in place with masking tape. Once you have these sections tack soldered, remove the tape and finish soldering.

6

Finish-solder the panel and create raised solder dots for the tiny eyes.



7

Add the hanging rings.



Use needle nose pliers to hold the hanging rings in place while you solder. Attach two rings, one on either side of the back of the panel, where the wing meets the back of the bird's head.

8

Clean the panel and apply the black patina.

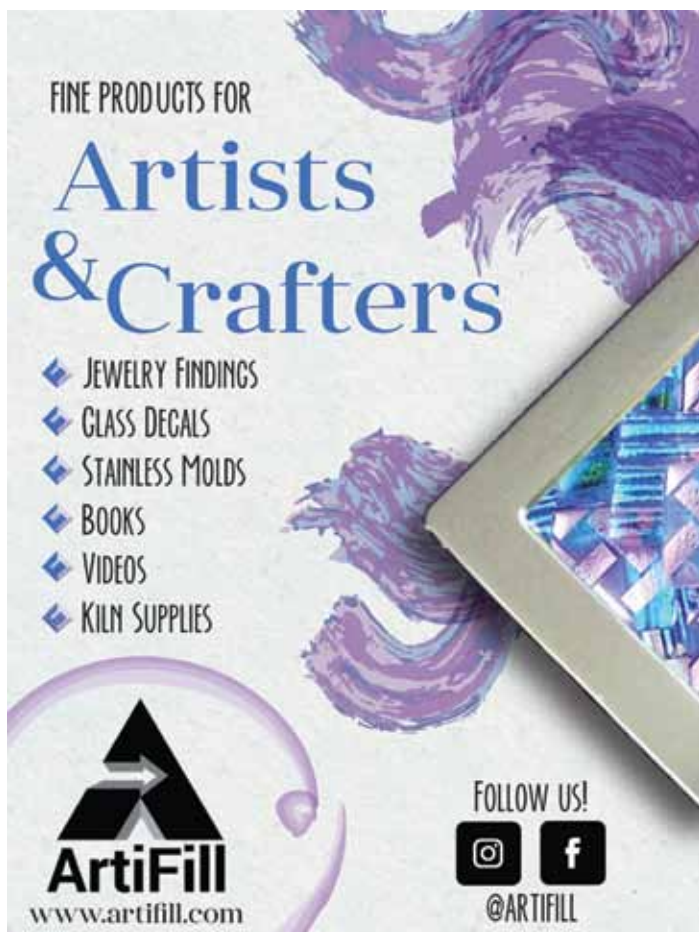


Using flux remover, clean the panel on both sides, rinse, and let the panel dry. Use a cotton swab to apply black patina to both sides of the panel. Rinse off the glass when you are finished applying the patina.

9

Wax and polish the panel.





Using a clean, soft cloth, apply the polishing wax to one side of the panel and let it dry, then turn the panel over and apply wax to the other side. When the wax dries to a haze, gently buff the glass to a bright shine using another clean, soft cloth. You may need to use an old toothbrush to reach the dried polish in some sections.

Add a tiny dot of white hobby enamel to highlight the eyes of the hummingbirds.

10



Stir the white hobby enamel with a toothpick until the color is blended. Using a toothpick, place a tiny drop of the white enamel onto the eyes on one side of the panel. Let the paint dry overnight and repeat the process on the other side. Now that you have completed this project, let the sun illuminate these sweet birds as you sit back and enjoy your finished artwork.

GPO

### Optional Sparkle

There is an “option” that you can choose to apply, just when you thought you were done. Add a bit more sparkle to these shimmering birds by suspending a crystal from the bottom of the panel. The crystal can be any shape and any color as long as it has an opening for stringing.

### Optional Step 1

Add another hook.



Using fine steel wool, remove the patina from the back of the tail feathers where the two sets of feathers meet. Solder a small hanging ring centered where the tail feathers meet. Once again, apply patina where the new hook has been added, then clean up the patina.

### Optional Step 2

Create a loop from the Supplemax flexible nylon line and suspend the crystal from the bottom of the panel.



How long a section of line is up to you! Tie a secure knot in the line, and this time, I promise, you have completed the project.



With a main focus in drawing and painting, Leslie Gibbs enjoys transforming her more traditional artwork into glass. Charmed by both wildlife and the creatures of the sea, she often depicts the real along with the fanciful denizens of these worlds in her design and pattern books.

Leslie and Jon are longtime Florida residents. They currently live and work in a small beach town in Northern Florida, having forsaken the Badlands of South Florida for a more peaceful lifestyle featuring more wildlife and less concrete. A relentless jokester, the artist tackles life's common absurdities with a wicked sense of humor and a relaxed attitude. Visit [www.facebook.com/lesliegibbsstudio](http://www.facebook.com/lesliegibbsstudio) to learn more about Leslie and her art.





**Start working on your  
new pattern today**

**BEST  
STAINED  
GLASS  
PATTERNS**

[www.BestGlassPatterns.com](http://www.BestGlassPatterns.com)

Handcrafted Stained Glass Since 1924

RETAIL • WHOLESALE • GLASS  
TOOLS • SUPPLIES • & MORE!

**Check it out!**

Our new and improved website  
is easy to use with more  
products than ever before!



**FRANKLIN ART GLASS STUDIOS**  
CELEBRATING  
**95**  
YEARS  
1924 - 2019

**Our Website offers:**

- Same day shipping
- World wide shipping
- Simple navigational system
- Compatibility with desktop, laptop, tablet, & cell phone

**614.221.2972**  
222 E. SYCAMORE ST. COLUMBUS, OH 43204

[FRANKLINARTGLASS.COM](http://FRANKLINARTGLASS.COM)

FOLLOW US ON  
Instagram



**Brooklyn Hardware**  
MANUFACTURING

**>>Panelclip® >>Clipz® >>Kingclip®**

**Brooklyn Hardware's  
French Cleat  
hanging system  
makes it easier to  
display your artwork.  
The wedges interlock  
to securely attach  
items to a wall. Visit  
our website or call us  
for more information.**

**[www.panelclip.com](http://www.panelclip.com)**

**1-888-232-1151**

# Flying Duck

*Design by Jean Beaulieu, Text by Darlene Welch*



As bird watchers everywhere will tell you, there's nothing more amazing than seeing a bird in flight. Canadian artist Jean Beaulieu has perfectly captured that wonder in this 24" x 17-1/2" stained glass design. The panel is one of 12 superb patterns from his collection, *Beautiful Birds 1—Illustrated Designs of Elegant Winged Creatures*.

Included in this 28-page volume are patterns for a dove, swan, blue jay, rooster, geese, hummingbirds, and six other designs. A color photo of each finished panel is also included in the book. Visit [www.jeanbeaulieu.com](http://www.jeanbeaulieu.com) to check out more of the artist's pattern books as well as his greeting cards and acrylic frames.

**GPQ**

## **Wissmach Glass Company**

BLACK for Eye, Scrap

WO-112 Dark Green/Dark Amber/Opal Wisspy for Head, Scrap

1-L Silver Yellow/Light Opal/Crystal for Beak, Scrap

71-L Dark Brown/Green/Light Blue/Light Opal/Crystal

for Neck and Back, Scrap

502-L Light Opal/Medium Gray/Brown for Breast and Wing, Scrap

503-L Light Opal/Dark Gray/Brown for Wing and Tail, 1 Sq. Ft.

118-LL Cobalt Blue/Opal/Crystal Streaky for Wing, Scrap

243-LL Dark Blue/Yellow Green Streaky

for Water and Landscape, 1/2 Sq. Ft.

WO-94 Medium Purple/Amber/Opal/Crystal Wisspy for Sky, 2 Sq. Ft.

## **Tools and Materials**

7/32" Copper Foil Flux Solder

Black Patina 1/2" Zinc U-Channel

© Copyright 2019 by Glass Patterns Quarterly™.  
All rights reserved.



# Glass Expert Webinars™

Live Two-Hour Webinars  
Ask Your Questions  
Link to Class Recording Never Expires!

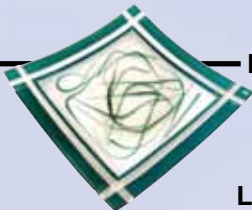
**Rick Silas**

*The Art of Ice Glass*  
December 12



**Dennis Brady**

*Vitrigraph*  
January 7



**Lisa Vogt**

*Fused Glass Sculptures*  
January 14 **New**



**Tony Glander**

*Shaterglass*  
January 21



**Joe Porcelli**

*Cutting Glass*  
January 28



**Dennis Brady**

*Selling Your Work*  
Lecture  
January 30



**Rick Silas**

*Plant Pressing*  
with Ice Glass  
February 4



**Tony Glander**

*Screenprinting*  
February 18



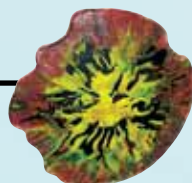
**Richard La Londe**

*Liquid Glassline*  
Lecture  
February 20



**Dennis Brady**

*Screen Melt*  
February 25



**Harish Dewani**

*Realistic Sandblasting*  
March 10



Visit the Glass Expert Webinars™ link under  
“What’s New” at [www.GlassPatterns.com](http://www.GlassPatterns.com) for  
more details and local times.



## DELPHI

STAINED GLASS FUSING MOSAICS JEWELRY SUPPLIES



Request a FREE Catalog today!  
[DelphiGlass.com/Catalog](http://DelphiGlass.com/Catalog)  
800-248-2048



Artist: Gabriele Bryant of Glass ArtScapes LLC,  
From Delphi's Online Artist Gallery.

**Gifts for the Glass Artist in Your Life**



### \$10 OFF

Order of \$100 or More

Use Coupon Code **Bonus4U**

Hurry! Offer Ends March 15, 2020

For Details Visit

[DelphiGlass.com/pr/GPQ](http://DelphiGlass.com/pr/GPQ)



# Glendalough

## A Legendary Irish Landscape

*Design, Fabrication, and Text by David Kennedy*

Photography by Sharon Kennedy

As you gaze out across the lake to the distant mountains, you could be forgiven for mistaking this legendary landscape as a scene from *Game of Thrones*. It is, in fact, the monastic ruins at Glendalough, situated in the Wicklow National Park in Ireland. In the foreground is the round tower, which is 30 meters (almost 99 feet) high, and St. Kevins church, named after the saint who founded the site in the late 6th century, after which it developed into a major settlement. If you ever visit Ireland, this is a must-see attraction. Until then, you can enjoy the scene depicted here by making this simple panel.



### Wissmach Glass Co.

85-D Medium Purple/Sky Blue Dense Opal/Crystal for Sky and Mountains, 1-1/2 Sq. Ft.

145-D Dark Amber/Dense Opal/Crystal for Mountain Center, Scrap

WO-704 Medium Green/Brown/White Opal Wisspy for Trees and Tree Line 1/2 Sq. Ft.

WO-707 Light Blue/Dark Blue/White Opal Wisspy for Lake, 1/2 Sq. Ft.

565-L Gray Light Opal/Dark Gray for Towers and Church, Scrap

WO-152 Yellow Green/Dark Green Wisspy for Grassland, 1/2 Sq. Ft.

EM318 Medium Olive for Foliage, Scrap

EM343 Green for Foliage, Scrap

EM161 Light Olive for Foliage, Scrap

570-L Dark Gray/Light Opal for Tower and Church Roofs, Scrap

343 Medium Green Cathedral for Foreground Trees, Scrap

### Tools and Materials

7/32" Copper Foil    Burnishing Tool

50/50 Solder    60/40 Solder

4x4 C- or U-Channel Lead Came

3/4" Grinding Bit    Water Soluble Flux

Tinned Copper Wire    0.5 mm Chain

Fine-Tipped Permanent Marker Pen

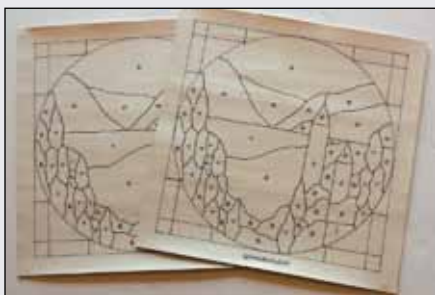
Small Paintbrush    Stiff Brush

Dish Detergent    Black Patina



Start by making two copies of the pattern, one for using as a template and one for cutting out the glass pieces.

1



Prepare a jig for building the panel.

2



Mine is approximately 12" in diameter. The finished panel will be hung in a window, and the jig will produce a nice, neat finish.

3

Cut the sky from the Medium Purple/Sky Blue Opal glass.



I have taken a piece of Wissmach 85-D Medium Purple/Sky Blue Opal and cut the sky from it using the lightest part of the sheet. I later used the darkest part of the sheet to cut the mountain pieces on the right and left.

4

Add the center piece for the mountains using a scrap of the Dark Amber/Dense Opal/Crystal.



Cut out the glass pieces for the lake and the background tree line.

5



Cut the water pieces using the Light Blue/Dark Blue/White Opal Wisspy and the tree line pieces using the Medium Green/Brown/White Opal Wisspy.

6

Add a tree on either side of the panel using the Medium Green/Brown/White Opal Wisspy.



This will help to build up the foreground of the scene.

7

Place the glass pieces for the tower and church and the surrounding foliage.



Using the Light Gray and Dark Gray, cut the tower and church on the right side of the panel. Add the foliage surrounding the church using the various shades of green.

8

Cut and place pieces of the Yellow Green/Dark Green glass for the grasslands.



9

Finish the trees and foliage on the left side of the foreground.



I have used three different shades of green, all from English muffle glass.

10

Foil all of the glass pieces.



Once all of the pieces are cut, foiling can commence. Remove the pieces from the template, one at a time, apply the foil, and replace the pieces, making any necessary adjustments as you proceed. There is no need to foil the glass that will be on the outside edge of the panel, since the lead came will cover that.

11

*Make sure the foil is well burnished onto the glass edges.*



I find that a putty knife is excellent for this procedure. Replace the pieces in the jig and make any adjustments as you proceed.

12

*Flux and solder the panel, front and back.*



When all of the pieces have been foiled, apply flux to the seams and solder them flat using 50/50 solder. Remove the panel from the jig and repeat the fluxing and soldering process on the reverse side.

13

*Frame the panel with C- or U-channel lead came.*



Stretch a section of C- or U-channel lead came and cut a piece approximately 39" for a 12"-diameter panel. This can be eased around the outside edge to provide a nice, neat finish.

14

*Complete the soldering, reapply flux to the seams, and bead-solder the panel on both sides using 60/40 solder.*



15

*Add hanging hooks for the panel and windows for the towers.*



Attach hooks for hanging the panel. To create windows for the two towers, make simple overlays using a small piece of 7/32" copper foil.

16

*Once all of the soldering is complete, clean the panel using a tiny amount of dish detergent and warm water.*



A stiff brush will help to remove all of the flux and solder residues.

17

*Apply the black patina.*



Using a small paintbrush, apply the patina to the seams, leave for a couple of hours, then give the panel a final clean and polish. The completed panel can now be hung in a window of your choice.

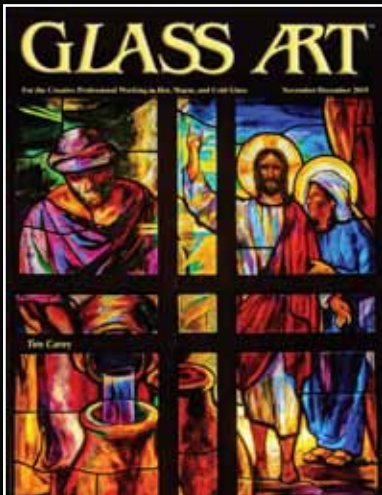
**GPO**

*David Kennedy began his stained glass journey in 1984. After mastering the basics, he moved on to art glass, which has now become his passion. The artist doesn't use plating or painting techniques, preferring instead to take his inspiration from the glass itself.*

*David is now in the process of publishing his original designs on Etsy.com with the help of his wife Sharon. They live on the Hook Peninsula, located in a rural historic southeastern section of Ireland, where he produces panels and designs in his own unique style.*







## Your Subscription Any Way You Want it

- Print
- Digital PDF
- PDF on CD



Red Pengean, slumped bowl  
by Bob Leatherbarrow.

For the  
Creative Professional  
Working in Hot, Warm,  
and Cold Glass

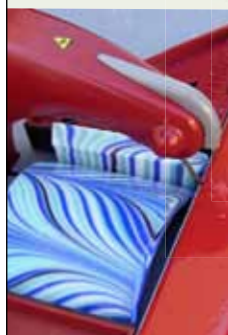
www.GlassArtMagazine.com  
502.222.5631

**NEW!**

**Automatic precision  
straight cuts!**

SEMI-AUTOMATIC  
**FLOATING  
TRAY**

**TAURUS 3**  
RING SAW



Simply pull back the tray, place the item to be cut between the magnetic angles, start the saw, and it will cut perfectly without operator attention.

The tray fits all Taurus 3 Ring Saws simply and easily without modification.



GEMINI SAW CO.

**GEMINI SAW COMPANY, INC.**  
**310-891-0288**  
[www.geminisaw.com](http://www.geminisaw.com)

For  
**Fusing, Mosaics, Stained Glass**

the Morton starting point will be the same!

1... Mini Surface Plus 2... Safety Break 3... Portable Glass Shop

Free training videos at  
[mortonglass.com](http://mortonglass.com)

Spend some time  
at [mortonglass.com](http://mortonglass.com).  
Check out the Portable Glass  
Shop eManual... the expanded  
instructions will have you up  
and running PDQ.  
Download projects,  
like this star at  
[mortonglass.com](http://mortonglass.com).



"SB01"  
Safety Break

2 Panel "SS02P"  
Mini Surface Plus

Panels  
Interlock

"PG01B"  
Portable Glass Shop

"Cutter Slide", now  
part of the Glass Shop.  
Call or email to update  
your unit. Use it right or  
left handed for better  
scores.



No "Fast Angles"?  
Call us... trade-up  
plans available!

**Morton Glass Works**

Web - [www.mortonglass.com](http://www.mortonglass.com)

Email - [mgw@mortonglass.com](mailto:mgw@mortonglass.com)

Phone - 309-266-5712

The Morton System  
**Don't Do Glass Without It!**

# Funky Frannie

*Design, Fabrication, and Text by Pat Chase*

*Photography by Emily Grant*

Ever since I discovered stained glass, I have gotten a lot of pleasure from creating original designs, beginning with lamps and windows that included real seashells. I drew my first angel for Christmas in 1999, since I couldn't find a suitable pattern at the time. I didn't do any drawing as a rule, but Grace was so easy. The positive response that I received encouraged me to continue designing more angels. When the time comes to begin a new project, I use assorted glass from my supply and begin to cut out the pieces with my preferred Toyo 600 pistol grip glass cutter.

Even though I am now a professional artist creating windows, lamps, and mosaics, as well as specialty work including commissioned art for churches, I still get a thrill from gifting these angels to friends and family. I hope you enjoy making Frannie as much as I did.



## **Glass**

Assorted Desired Glass Colors  
and Textures, Scrap

## **Tools and Materials**

Black Sharpie® Marker

Clear Contact Paper

UHU Tac    Breaking Pliers

Glass Cutter    7/32" Copper Foil

18- or 20-Gauge Wire

Wrapped Glass Nugget

Super Glue



Trace the pattern pieces onto the glass with a Sharpie marker, then score the lines with a glass cutter.

1



I work on a light box with 2 patterns and a Sharpie to draw on my glass pieces. On one pattern I put clear contact paper to use with UHU tac, a product that is used to hang posters and similar items. It's reusable, and only a small amount is needed to stick the glass pieces in place. This works better for me than using pushpins.

Use breaking pliers to separate the individual glass pieces.

2



Grind all of the pieces to ensure a better fit.

3



Assemble the glass pieces on the pattern that is covered with contact paper.

4



Foil each piece, then tack-solder the pieces together and finish-solder the panel.

5



I use a thinner foil on all of the inside seams and a wider one for outside edges. I then trim any overlaps with an X-Acto knife to give a clean soldering line.

Tack-solder and solder as normal. For the bird and wing I put foil on the connection points and solder after completing the back side. The bird on the head and the flower are attached last.

The flower that Frannie is holding is created from twisted copper wire. If possible, use 18-gauge wire to form the flower, but 20-gauge will also work. A wrapped glass nugget is used for the center. I added a drop of solder to the petals and the attached nugget. I actually use Super Glue to stick it to the finished piece at the hands. Finally, I add a patinated solder drop for the bird's eye.

Clean the panel, apply black patina to the solder lines, and polish the piece.

6



If you want to hang your panel, twist two 3" to 4" lengths of wire into loops and solder them onto the back of the panel at the seams while you are working on the back side of the panel. **GPQ**

Pat Chase has been creating stained glass art since 1997. After learning the basics, she started making windows and lamps, incorporating real seashells into her original designs. According to Pat, "My first pieces were not that expert, so I used solder drops to fill in the gaps. That seemed to go along with my shell and water designs. After I made a number of pieces, selling some and giving others as gifts, I discovered that it was fun!"

Pat made her first angel pattern, Grace, for Christmas 1999. Her friends at the studio immediately wanted the pattern, which was the beginning of her angel design collections. With the help and guidance of CKE Publications, Angel Companions was released in July 2007 through worldwide distribution. She recently self-published her second pattern book, Angel Companions II.

The artist and Stephen, her husband of almost 50 years, enjoy their church, family, friends, and Bluegrass music from their home in Port Hadlock, Washington. Pat feels that all of this has been possible thanks to God and His angels. Her wish for others is to enjoy her designs and pass on the love. Visit [www.angelglassart.com](http://www.angelglassart.com) to learn more about Pat and her designs.



# Swallowtail

*Design by Justin Behnke, Fabrication and Text by Cindy Dow Savary*

Photography by Cindy Dow Savary, Gerry L. Savary, and Susan Walker Bowen



One of my favorite artists is Justin Behnke. *Swallowtail* is my third time using one of his patterns. After careful consideration, I am modeling this 17-1/2"-diameter panel after the female Eastern Tiger Swallowtail. In nature, the females of the species seem to always take a backseat when it comes to color, but not so in this case. Male Eastern Tiger Swallowtails are always yellow with black stripes. Females, on the other hand, can be yellow with black stripes and a splash of blue on their tails. They can also be solid black with a splash of blue on their tails.

Starting a new project is always exciting. Before I start using any pattern, I get out my crayons and colored pencils and am brought back to some of my best childhood memories. A few pattern designers supply you with a color legend or colorized picture. However,

part of the fun is doing the research and using your imagination. Be yourself and be unique.

Coloring your pattern is helpful for a variety of reasons, one of which is that it helps you in picking out your glass. It is also an invaluable tool for visualizing the end results. You will be surprised by how your colored pattern will resemble your final panel.

Justin supplies two copies of his patterns that are already numbered. In addition to the numbers for the pattern pieces, you may want to mark for grain direction on the pattern, depending on the glass you use. There are many methods for separating the pattern pieces. For this project, I laminated one of the copies and used foil pattern scissors to cut out the separate pieces. The other copy will be used for the layout.



### Wissmach Glass Company

310CLA Dark Amber Classic  
for Rope Border and Butterfly Wings, 1/4 Sq. Ft.  
EM4932 Medium Yellow Green  
for Leaves, 1/2 Sq. Ft. Additional Glass  
Dark Orange for Center of Flower, Scrap

### Spectrum Glass

OGT60768 Orange Inferno Pearl Opal, 1/2 Sq. Ft.

### Additional Glass

Avocado Green for Flower Stems, Scrap  
Black for Butterfly Wings, Scrap  
Bright Yellow Opal for Butterfly Wings, Scrap  
Medium Blue Hammered  
for Butterfly Wings and Body, Scrap  
White/Dark Blue for Outer Border, Sq. Ft.  
Firelight White Opal for Rope Border, 1/4 Sq. Ft.  
Clear Iridescent Rough Rolled  
for Background, 3/4 Sq. Ft.

### Tools and Materials

Foil Pattern Scissors Toyo Pistol Grip Cutter  
Grozing Pliers Running Pliers  
Grinder Petroleum Jelly Pushpins  
Permanent Markers Rubbing Alcohol  
Paper Towels X-Acto® Knife  
13/64" Black-Backed Copper Foil  
Aanraku Foil Burnish Roller Nokorode Paste Flux  
60/40 Solder Hakko® FX-601 Soldering Iron  
Safety Glasses Kwik-Clean® Flux & Patina Cleaner  
Cotton Swabs Nitrile Gloves JAX® Pewter Black  
Novacan Black Patina Cotton Rounds  
Liva Stained Glass Polish Hammer  
Horseshoe Nails Lead Nipper (Dyke)  
1/4" Lead U-Came

Colored Pattern



Side by Side  
Comparison



1

Glue the  
pattern pieces  
to the glass.



2

Score as  
close to the  
pattern as  
possible.



3

Use running  
and grozing  
pliers, as needed,  
to separate and  
remove excess  
glass.



4

Use a  
grinder to  
smooth any  
rough edges.



For some pieces, I like to use a grinder cookie.

5

Place the  
pieces of glass  
on the layout  
pattern copy.



Make sure to dry the laminated pattern pieces so that you can reuse them later.

6

*Before foiling, clean each piece with rubbing alcohol and dry.*



7

*Apply the foil to all of the glass pieces.*



I use 13/64" foil and like to foil by hand. Put the glass to the foil, making sure it is centered, then wrap the entire piece. Try not to overlap. Use your fingers to smooth the foil on each side and burnish the foil with either a fid or foil roller until it is smooth on both sides of the glass and on the edge.

8

*Flux and solder the pieces.*



Apply flux to the copper foil lines. Note that too much flux can cause the solder to splatter and create bubbles in your solder seam. Tack-solder each joint with a small drop of solder before running a smooth raised bead of solder on the front and back.

9

*Thoroughly clean the project using Kwik-Clean to remove any residual flux, then apply the Novocan black patina.*



Be sure to wear gloves. After the patina has been applied, clean the piece again with Kwik-Clean.

10

*Polish the panel.*



Add a thin layer of Liva Stained Glass Polish and let it dry. Wipe off the polish using cotton rounds. For those hard to get places, use cotton swabs.

11

*Frame the panel using 1/4" lead U-came.*



The came will need to be stretched. Your local glass store will be able to do this for you. You can also use a vise. Use horseshoe nails to secure the U-came to the panel.

12

*Gently tap the U-came with the hard end of the hammer until the glass is secure in the channel.*



13

*Use a lead nipper to cut the lead U-came where the ends meet.*



14

*Apply flux where the soldered lines meet the U-came and solder.*



Be careful not to hold the soldering iron in place for too long, because that will cause the U-came to melt. Add JAX Pewter Black to the U-came, then clean the panel with Kwik-Clean.

15

*Add jump rings at the joints where the solder lines meet the U-came for hanging the panel.*



GPO





Cindy Dow Savary has always had a passion for art and has been a crafter all of her life. After retiring in August 2017, Cindy took her first stained glass class in April 2018, and by June 2019, her work was exhibited at the City of Round Rock Texas Library. From that showing, Cindy received her first commission to repair and enlarge a piece that would become part of a new Airbnb called Annabella's Studio. The client wanted to honor the memory of her friend, the original artist.

Cindy has continued to create panels to honor the memories of loved ones including her mother, who died in 1959. With the help of a friend, Michal Adams, Cindy was able to create a panel after one of her mom's oil paintings, Zinnias in a Vase.

© Copyright 2019 by Glass Patterns Quarterly™. All rights reserved.

# Do You Retail to the Stained Glass Craft?



## BECOME A DISTRIBUTOR FOR STAINED GLASS

*Quarterly for the Stained Glass Association of America*

Make money while reading an award winning magazine! Easy minimums and an easy return agreement make this a win—win program for your retail store.

**Minimum Order:** Five copies

**Minimum Contract :** Four issues

**Right of Returns:** Return any unsold copies within 90 days for full credit on your distributor account!

For details and a Distributor Agreement, call the SGAA at 800-438-9581 or email to [headquarters@sgaaonline.com](mailto:headquarters@sgaaonline.com)



## New from Glass Expert Webinars™

Dennis Brady's Combing Glass

Purchase Forever Links to recorded Glass Expert Webinars™ classes. Included is the full chat between the teacher and students who attended the live class plus all of the teacher PDF handouts.



View from any laptop or desktop computer for as long and as often as you like through the free Adobe Connect app.

Go to the "Glass Expert Webinars™" link on the GPQ home page, then the "Recorded Webinar Links" area for a list of recorded Webinars that are currently available and check back often for new additions.

Michael Dupille's Working with Castalot Lecture

[www.GlassPatterns.com](http://www.GlassPatterns.com)



# Prairie Style Snowflake

*Design, Fabrication, and Text by Chantal Paré*

“I wish I could press  
snowflakes in a book  
like flowers.”

James Schugler



Snowflakes come in myriad shapes that have intrigued the scientists who classify them. The particular snowflake in this project is inspired by the stellar, regular plane crystal snowflake configuration. I have added a hint of Frank Lloyd Wright prairie-style angularity as an unexpected twist.

I chose to make this project in lead came in order play with a variety of lead line widths. Lead came is always a good choice for geometric projects when seeking a more traditional or architectural look.

Stained glass pieces using only clear, textured glass are always enthusiastically appreciated by viewers, since their calm restraint fits with every decor and every taste. They also tend not to break the craftsperson's bank! Wissmach's Aerolite provides a rigid, disciplined linearity, and the Figure C textured glass provides a very strong, frost-like counterpoint. I did use the very subtle Pale Blue English Muffle color and some iridescent Dew Drop glass for a hint of cool sparkle.



### Wissmach Glass Co.

EMx118 Pale Blue English Muffle, 1 Sq. Ft.

Dew Drop-01 Iridescent, 1 Sq. Ft.

Figure C 01 Textured 1 Sq. Ft.

Aerolite-01, 1 Sq. Ft.

### Additional Glass

3 mm Clear Float Glass, 1 Sq. Ft.

### Tools and Materials

H Flat or Round Lead Came, 3/16" or less

Electric Grinder with 3/4" Medium Grit Head

Carbide Wheel Glass Cutter

Glass Cutting Pliers Claw Hammer

Soft Mallet Wood Saw Light Box

Small Wood Pieces Metal File

Masking Tape 14-Gauge Pretinned Copper Wire

Window Putty Lead Came 1/2" Zinc U-Came

60/40 Solder Soldering Flux Burnishing Brush

Whiting (Calcium Carbonate) Tin Cutters Box

Came Miter Saw City Head Size 5 Horseshoe Nails

Masking Tape or Electrical Tape

Print a copy of the pattern and trace each piece onto the glass, excluding the black line area itself.

1



Using a light box helps with the process. Except for the center piece, each piece is repeated six times around the motif. Use this knowledge to speed up the tracing process.

2

Score the glass just on the marked lines with a carbide wheel glass cutter.



Break until all of your pieces are cut out.

3

Create a jig around your paper pattern for 5 of the hexagon's 6 sides with small wood pieces.



Meticulously follow the outside edge.

Fabricate a frame with the zinc U-came using the pattern and jig as a guide.

4



Use a marker to indicate the cut lines.

5

Set your miter saw for a 30-degree angle and cut 6 pieces of frame, one for each side of the project.



Smooth each cut with a metal file.

6

Starting in one of the upper corners, lead the project all the way down to the open side of the jig.



Cut the lead pieces and abut against the corresponding glass pieces following the paper pattern.

*Tip 1:* Straight came is important with a geometric pattern. To this end, you can stretch your came or gently hammer it into shape with a soft mallet.

*Tip 2:* Be sure that the glass is inserted inside the heart of the came with the vertical wall at its core. You can use the point of a horseshoe nail to lift the glass.

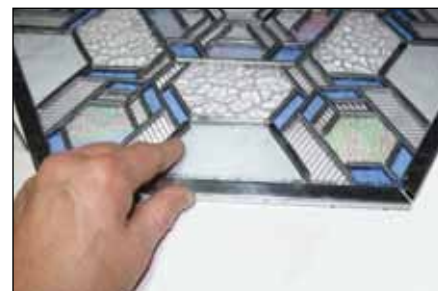
*Tip 3:* After you insert a piece, push it gently with a soft mallet for a tight fit. Visually check the lead strips for any small glass pieces that are slipping out of the came heart in the vicinity of the mallet's impact.

*Tip 4:* If a piece doesn't fit perfectly, grind away any excess glass with an electric grinder.

*Tip 5:* Scratch a line on the lead came to mark where it needs to be cut.

7

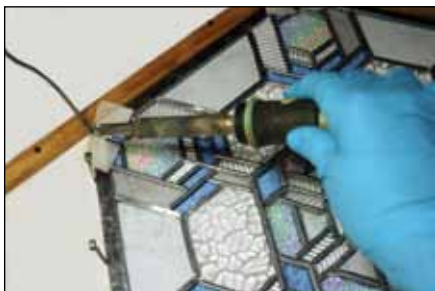
Slip on the last segment of zinc came to complete the frame.



After you have leaded your way to the bottom of the project, remove the two pieces of the jig on both sides of the bottom segment of the frame and hold these two sides in place with horseshoe nails. Stretch open the zinc U-came in the last frame segment by zig-zagging along the inside with a fid or by using pliers. Slip on the last piece of the frame and secure with horseshoe nails.

8

*Using masking tape as resist, solder the gaps between the frame pieces.*



9

*Solder the outer lead lines to the zinc frame.*



With a flux brush dipped in a small amount of flux, daub the zinc and immediately melt some solder with the iron tip to form a small bead. Let cool for 30 seconds and solder a similar solder bead on the lead line directly across from it. Allow to cool, then solder a bridge between the two beads.

10

*Solder every lead came joint.*



Use a light touch with the iron so as not to melt the came down. When all of the joints have been soldered, remove the project from the wooden jig, turn the project over, and solder the other side as you did on the first side.

11

*Bend some pretinned 14-gauge copper wire to form hooks and solder them into two of the joints in the frame.*



Depending on which joints you select, the snowflake will be displayed either with a pointy end up or a flat top.

12

*Examine the outside of the frame and solder any gaps in the frame corners.*



13

*Spread some window putty around and push under the came with your fingers on both sides of the project.*



14

*Apply whitening to the lead.*



Patina the lead came and joints by generously sprinkling whitening (calcium carbonate) and brushing vigorously with a burnishing brush until the lead is a beautiful dark gray.

15

*Remove any excess putty with a fid.*



16

*Wash with dish soap and good water flow, and thoroughly dry the snowflake.*



When you're done, hang it in your favorite window. **GPO**

© Copyright 2019 by Glass Patterns Quarterly™ . All rights reserved.



## "Flight into Fantasy"

Three Dimensional Kits



Each kit contains a solid cast body that accepts copper, antique patina or paint, and a full-size pattern with instructions.

"Flight Into Fantasy" kits offer Hummingbirds, Angels, Cardinals, Eagles, Ducks, Rooster, Dragons, Elf & Santa Faces, Dove, Moths, Flowers, Fairy Lady, Butterflies, Macaw, Parrot, and Victoria.

Available at your local stained glass supplier

WHITEMORE-DURGIN  
GLASS COMPANY



Celebrating 50 years of  
stained glass supplies



**Stained glass patterns,**  
kits, tools, supplies, books, jewels,  
mosaic and etching supplies,  
jewelry findings, and things you  
never knew you needed until now.

And glass. **Lots** of glass.

Shop online:  
[www.whitemoredurgin.com](http://www.whitemoredurgin.com)

Visit our fun store:

**825 Market St.  
Rockland, Mass.  
(800) 262-1790**

## Introducing the new TAP Controller

featuring  
touchscreen technology

**TOUCHSCREEN  
WI-FI ENABLED APP  
GRAPHICAL  
FIRING VIEW  
PRE-LOADED  
FIRING SCHEDULES  
SOFTWARE UPDATES**

**evenheat**

Better by Design.™

[www.evenheat-kiln.com](http://www.evenheat-kiln.com)



## HANDY HANGER

Compliments of  
Jessica from  
Anything in Stained Glass.

New Finley® and Ellie® Fusible Hangers

Each sold in 8-Pair Packages

Perfect for Fused Glass Art up to 5 Pounds

[www.HandyHanger.net](http://www.HandyHanger.net)



[www.GlassPatterns.com](http://www.GlassPatterns.com)



## In a Pattern Daze?

Custom Pattern Design Service  
For Studio & Hobbyist

- Have a Photo or Idea and want to try it in stained glass, fuse, or etch?
- Need a pattern resized or reshaped?  
Have a client who needs a special window design?  
Let us be your art department!
- All patterns printed full-size, cut & layout copies,  
color coded, and piece numbered.  
Glass recipe & color print provided

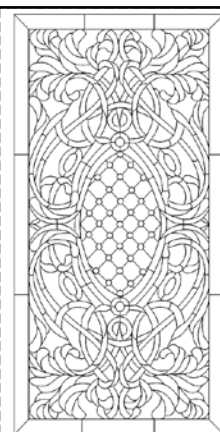
Phone: (410)-676-1248

Panex Expressions Studios  
Over 35 Years Design Experience

FAX: (410)-676-2112

Visit: [www.panexexpressions.com](http://www.panexexpressions.com)

E-mail: [SGPatterns@panexexpressions.com](mailto:SGPatterns@panexexpressions.com)



# Orchids

*Design by Terra Parma, Text by Darlene Welch*

Orchids form a diverse and widespread family of flowering plants, with blooms that are colorful and fragrant. Terra Parma celebrates their beauty with this 6" x 9-1/4" free-form stained glass suncatcher from her book, *New Floral Images*.

This collection of florals published by Stained Glass Images includes nine full-size patterns that represent a wealth of subjects including a cottage window box, morning glory wreath, rose arch, bearded iris and orchid suncatchers, a tropical sunset, and a hummingbird among lupine plants. These designs are waiting for you to turn them into beautiful stained glass projects that will add a special touch to any decor.

**GPO**



## **Wissmach Glass Company**

WO-701 Medium Purple/Dark Purple/White Opal Wisspy for Flower Petals, 1/2 Sq. Ft.

WO-140 Medium Purple/Opal/Crystal Wisspy for Flower Centers, Scrap

1-L Silver Yellow/Opal/Crystal Wisspy for Flower Centers, Scrap

23-L Light Green Light Opal/Copper Red for Leaves and Stem, 1/2 Sq. Ft.

## **Tools and Materials**

7/32" Copper Foil Flux Solder

Black Patina 1/4" Lead U-Channel

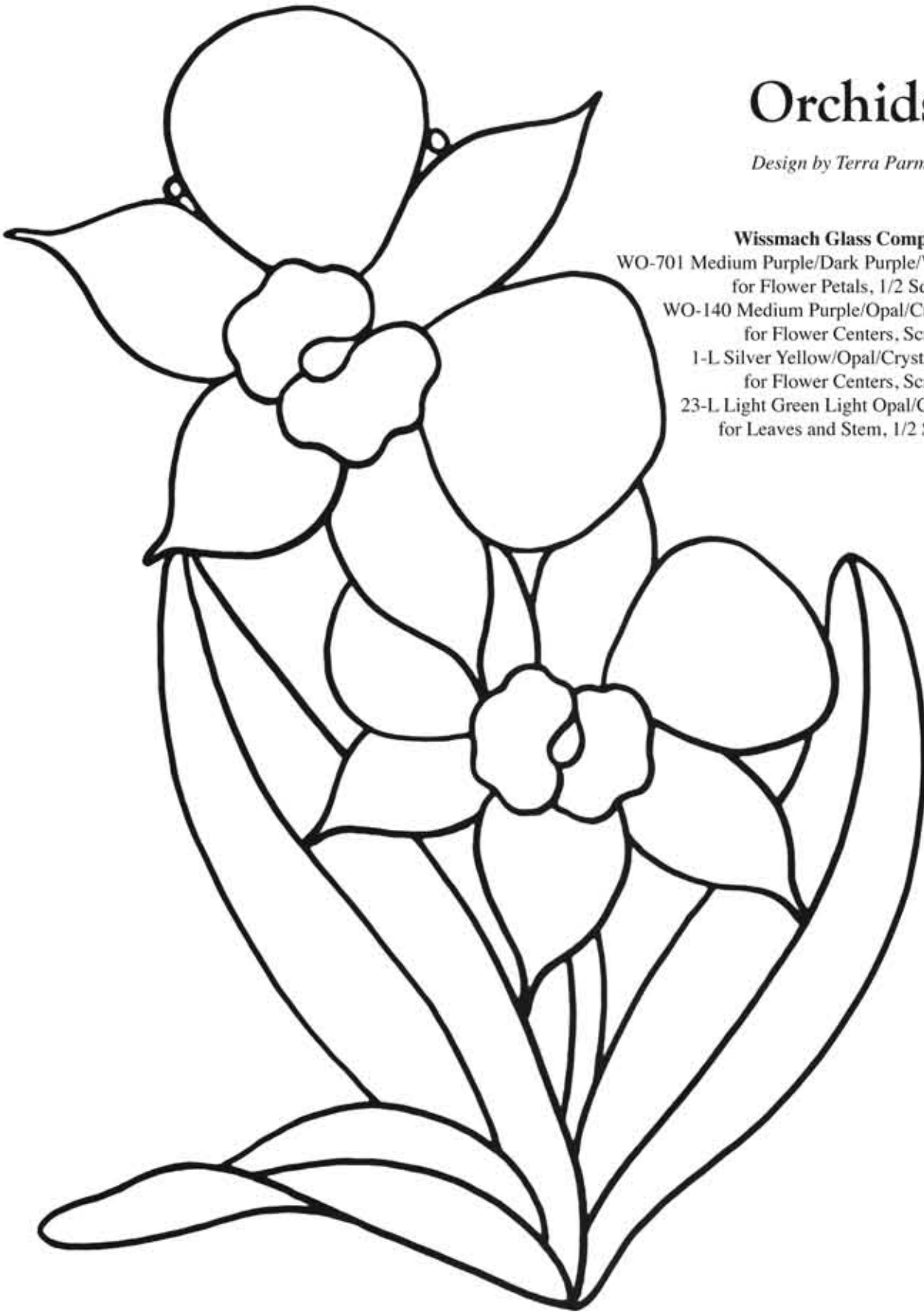
© Copyright 2019  
by Glass Patterns Quarterly™.  
All rights reserved.



## Orchids

Design by Terra Parma

**Wissmach Glass Company**  
WO-701 Medium Purple/Dark Purple/White Opal Wissy  
for Flower Petals, 1/2 Sq. Ft.  
WO-140 Medium Purple/Opal/Crystal Wissy  
for Flower Centers, Scrap  
1-L Silver Yellow/Opal/Crystal Wissy  
for Flower Centers, Scrap  
23-L Light Green Light Opal/Copper Red  
for Leaves and Stem, 1/2 Sq. Ft.



Copyright 2019 Glass Patterns Quarterly, Inc. All rights reserved under Pan American and International copyright conventions. The contents of this magazine and pattern sheet including text, pattern designs, photographs, and/or illustrations are copyrighted. Photocopying and all other types of mechanical or electronic reproduction are prohibited except for making personal copies of patterns for enlargement or reduction or for teaching (one copy of pattern only per student). Copying this material to give or sell to others, except as noted, is prohibited by law. You may build the projects and/or paint the designs from this pattern sheet for your own pleasure, for giving, and for limited retail sales at craft shows, craft malls, stained glass retail stores, and special orders. You may not hire people to mass-produce these designs, or any derivative product made from these designs, for the wholesale, retail, or gift markets or to print brochures marketing these designs (Internet included) without written consent of Glass Patterns Quarterly, Inc., and the contributing designers, and permission/licensing fees negotiated.



Enlarge to desired size

## Embossed Glass Choosing Your Own Drawing to Create Personalized Glass Art

Design by Dennis Brady

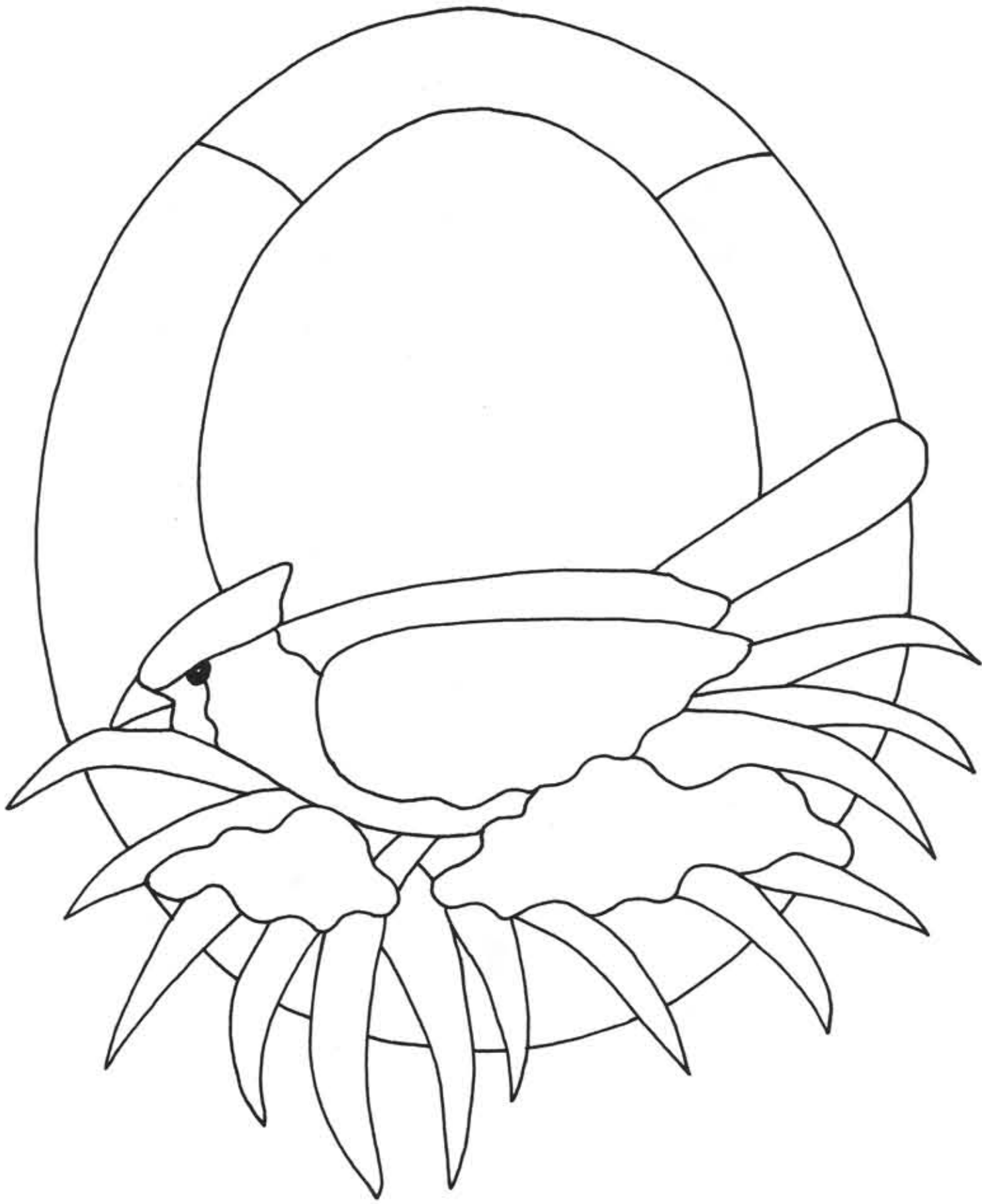
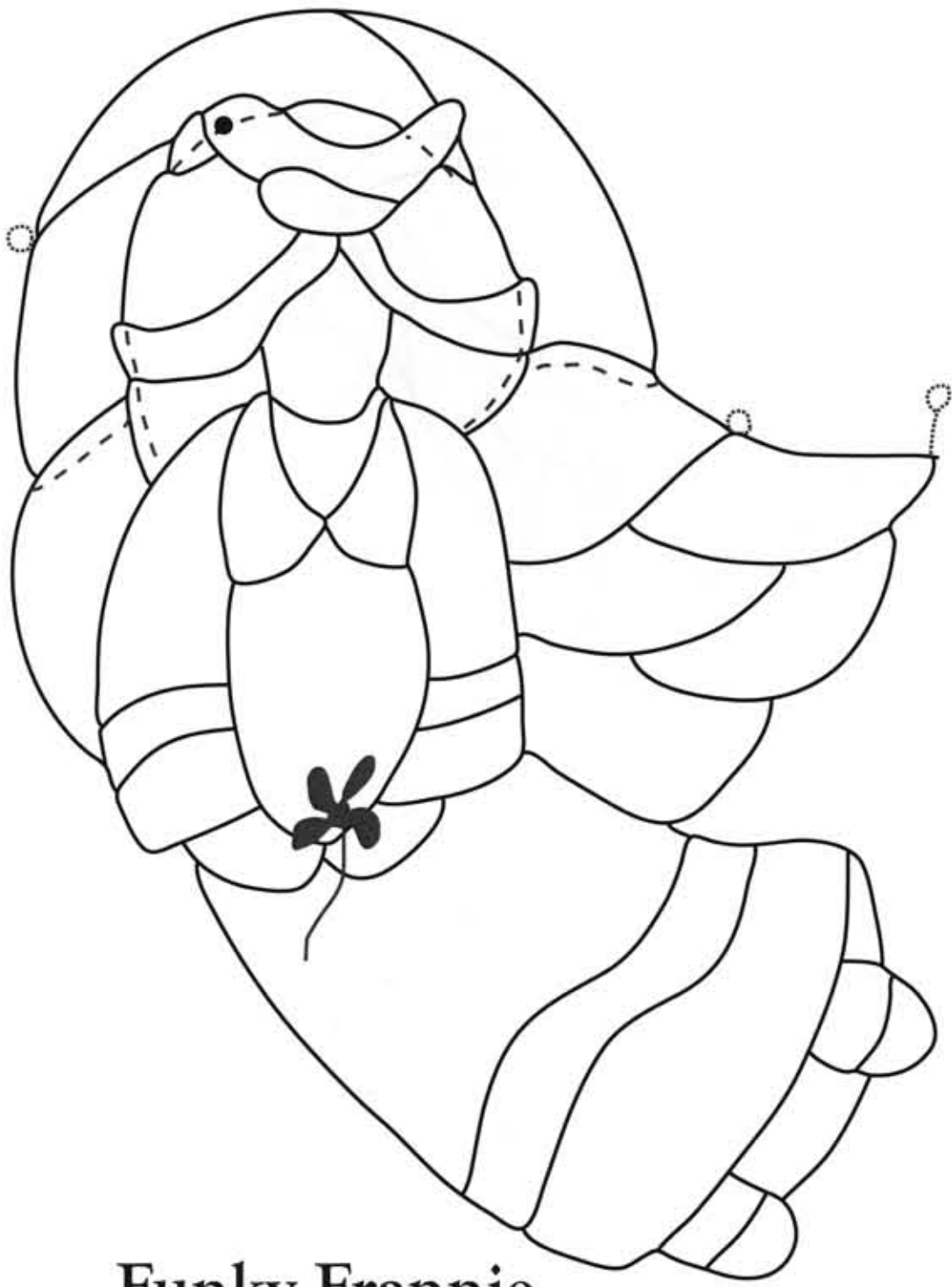
96 COE Glass  
Clear Glass, 12" x 12"  
Amber Glass, 12" x 12"

## Funky Frannie

Design by Pat Chase

Glass  
Assorted Desired Glass Colors  
and Textures, Scrap

Enlarge to desired size



## Cardinal in A Pine Tree

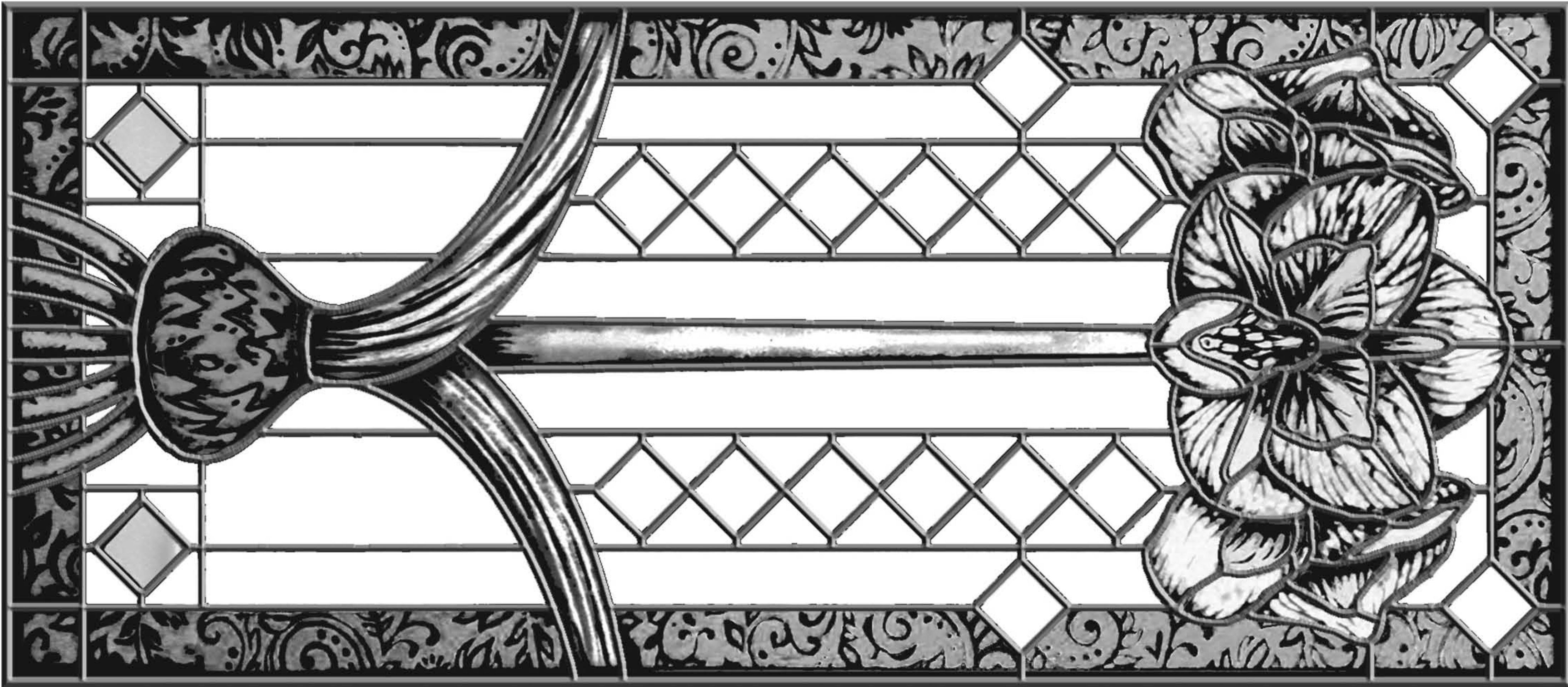
Design by Lisa Vogt

96 COE Glass  
Clear for Base, 1 Sq. Ft.  
Sky Blue for Sky, 1 Sq. Ft.  
Flame for Cardinal, Scrap  
Fern Green for Pine Tree, Scrap  
Marigold for Bird Beak, Scrap  
Medium White Frit for Snow  
Coatings By Sandberg  
Rainbow 1 on White Dichroic Frit

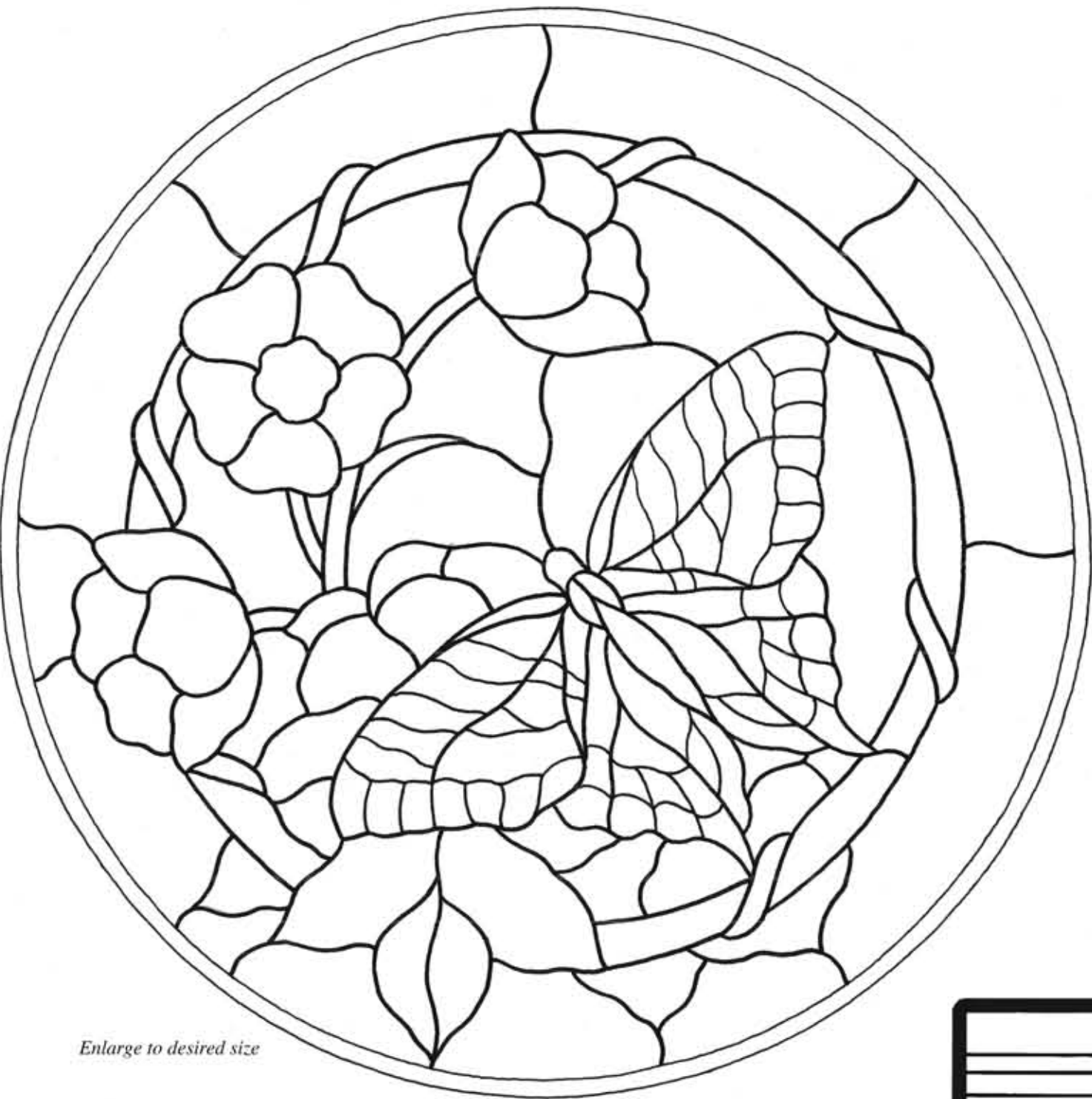
## Amaryllis

Design by Chantal Part

**Wissmach Glass Co.**  
18 H Light Orange Hammered  
for Flowers and Bottom Inner Border, 1 Sq. Ft.  
EM4931 Dark Copper Blue English Muffle  
for Outer Border, 1-1/2 Sq. Ft.  
DR319 Dark Yellow Green Double Rolled  
for Stem, Leaves, and Top Inner Border, 2 Sq. Ft.  
Aerolite-01 Clear Aerolite for Bottom Inner Border, Scrap  
**Spectrum Glass**  
110.8A Medium Amber Antique® for Background, Scrap  
**Youghiogheny Glass**  
1000 SP Stipple for Borders with Bevels, 2 Sq. Ft.  
**Additional Glass**  
1" Square Bevels for Background and Border Accents, 18  
3 mm Flat Glass for Mixing Paint, 2 Sq. Ft.





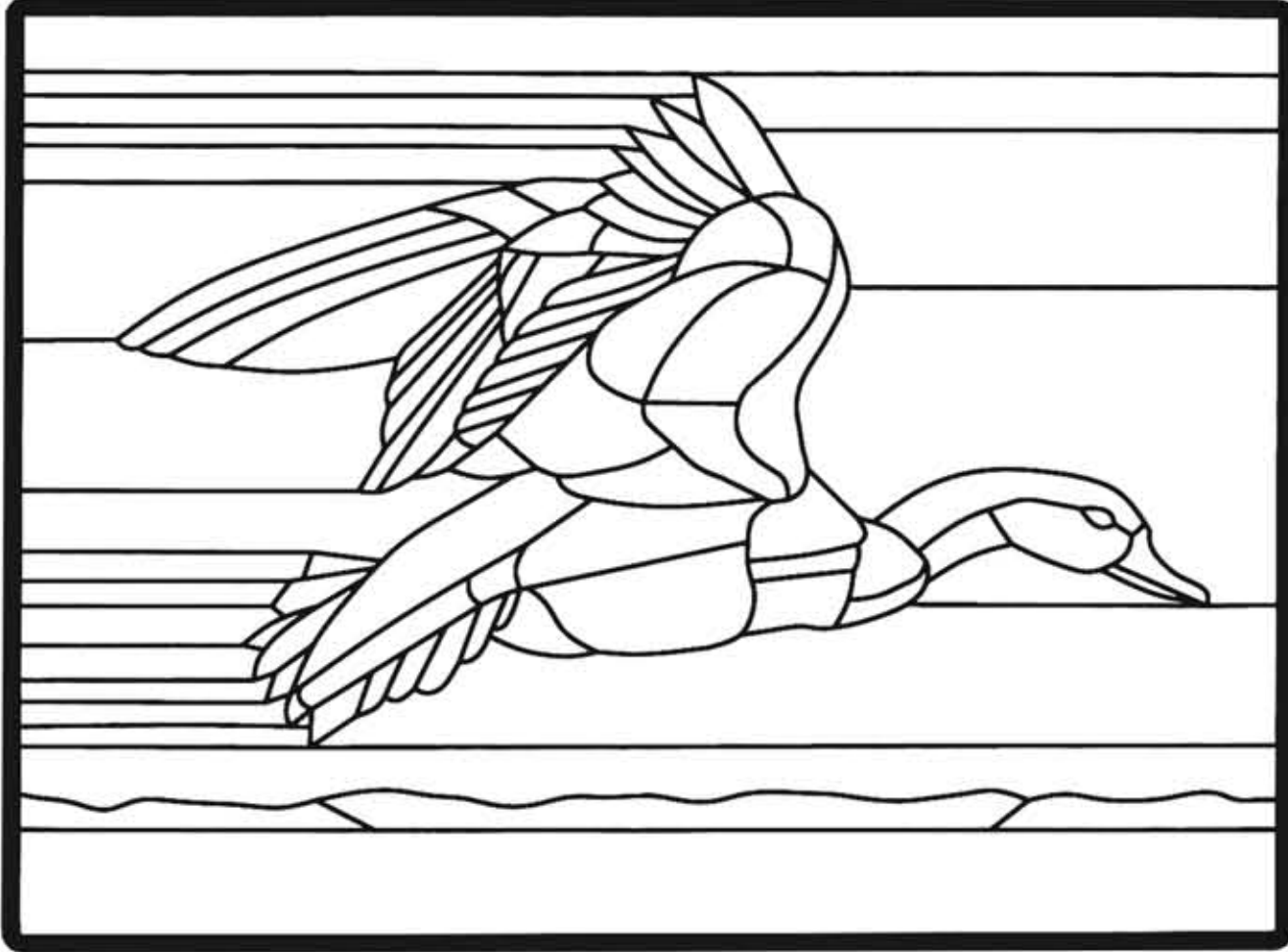


Enlarge to desired size

## Swallowtail

Design by Justin Behnke

**Wissmach Glass Company**  
310CLA Dark Amber Classic  
for Rope Border and Butterfly Wings, 1/4 Sq. Ft.  
EM4932 Medium Yellow Green  
for Leaves, 1/2 Sq. Ft.Additional Glass  
Dark Orange for Center of Flower, Scrap  
**Spectrum Glass**  
OGT60768 Orange Inferno Pearl Opal, 1/2 Sq. Ft.  
**Additional Glass**  
Avocado Green for Flower Stems, Scrap  
Black for Butterfly Wings, Scrap  
Bright Yellow Opal for Butterfly Wings, Scrap  
Medium Blue Hammered  
for Butterfly Wings and Body, Scrap  
White/Dark Blue for Outer Border, Sq. Ft.  
Firelight White Opal for Rope Border, 1/4 Sq. Ft.  
Clear Iridescent Rough Rolled  
for Background, 3/4 Sq. Ft.



Enlarge to desired size

## Flying Duck

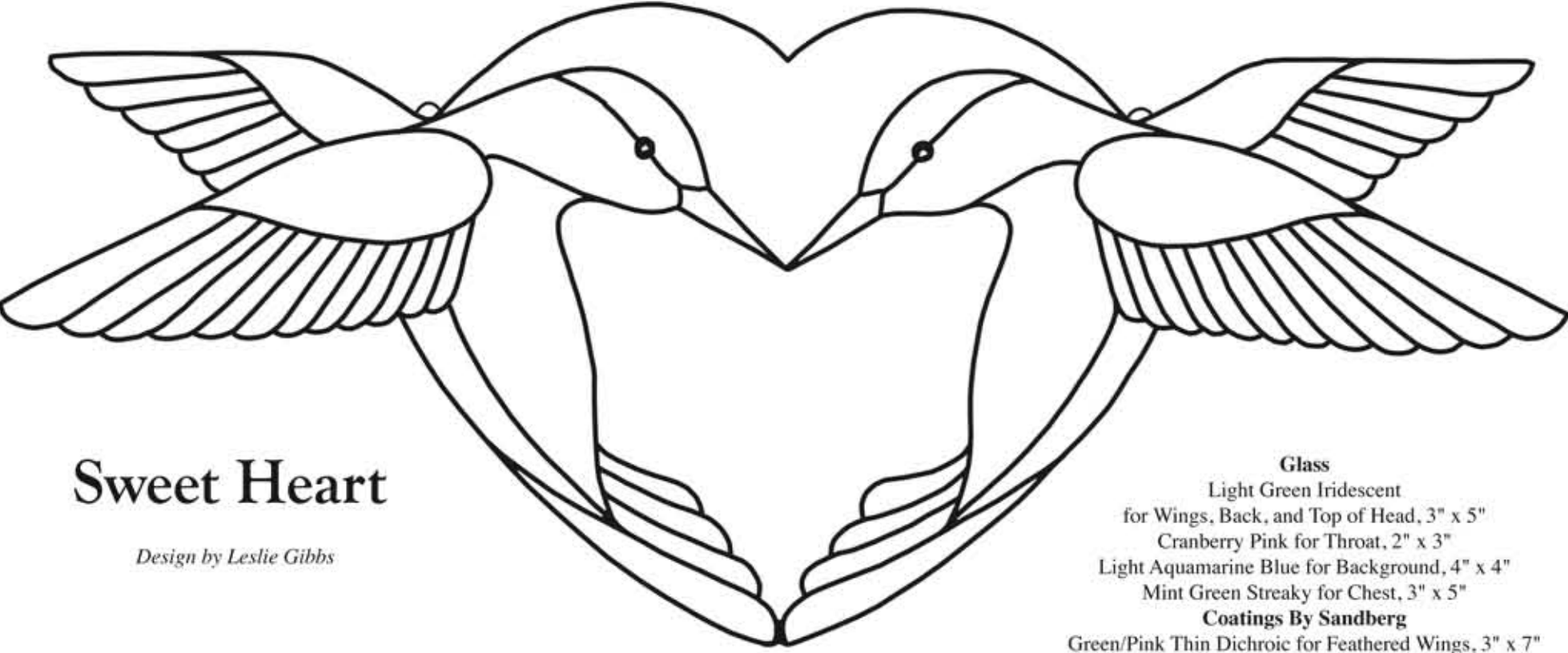
Design by Jean Beaulieu

**Wissmach Glass Company**  
BLACK for Eye, Scrap  
WO-112 Dark Green/Dark Amber/Opal Wissy for Head, Scrap  
1-L Silver Yellow/Light Opal/Crystal for Beak, Scrap  
71-L Dark Brown/Green/Light Blue/Light Opal/Crystal  
for Neck and Back, Scrap  
502-L Light Opal/Medium Gray/Brown for Breast and Wing, Scrap  
503-L Light Opal/Dark Gray/Brown for Wing and Tail, 1 Sq. Ft.  
118-LL Cobalt Blue/Opal/Crystal Streaky for Wing, Scrap  
243-LL Dark Blue/Yellow Green Streaky  
for Water and Landscape, 1/2 Sq. Ft.  
WO-94 Medium Purple/Amber/Opal/Crystal Wissy for Sky, 2 Sq. Ft.

## Glendalough A Legendary Irish Landscape

Design by David Kennedy

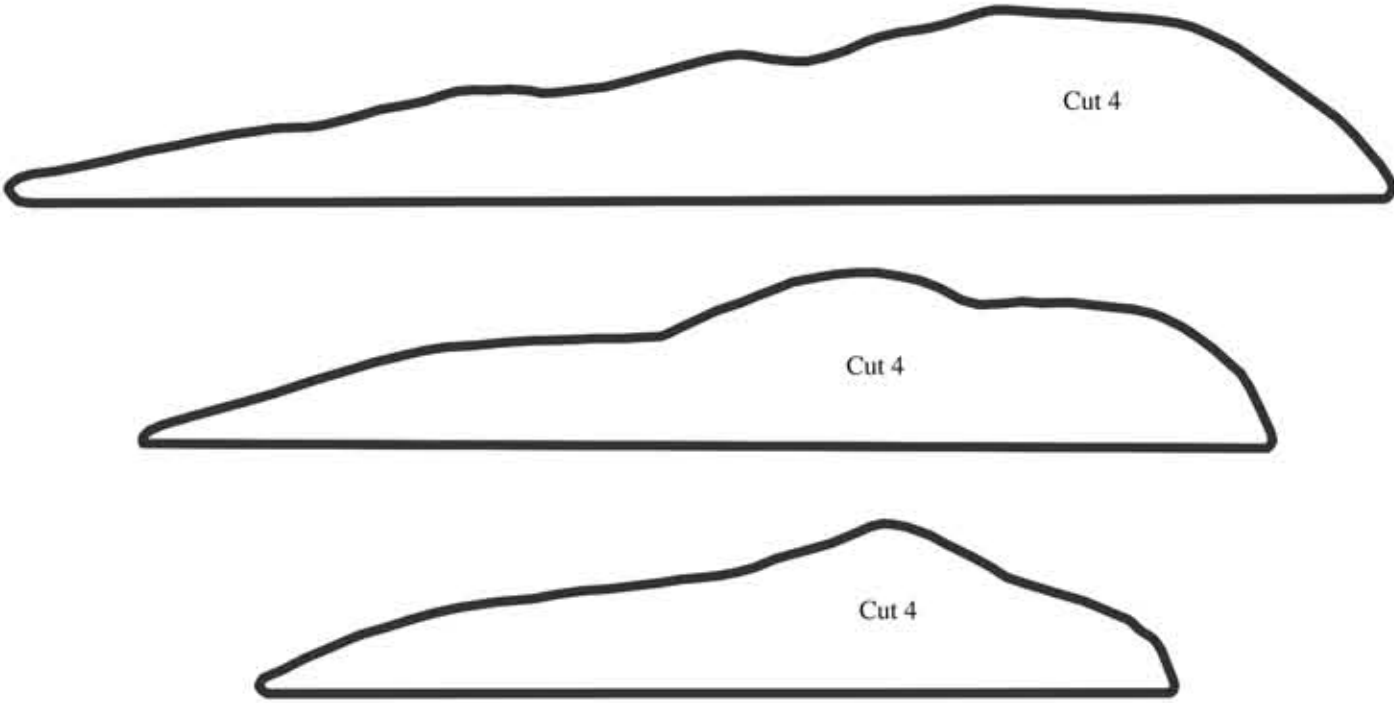
**Wissmach Glass Co.**  
85-D Medium Purple/Sky Blue Dense Opal/Crystal for Sky and Mountains, 1-1/2 Sq. Ft.  
145-D Dark Amber/Dense Opal/Crystal for Mountain Center, Scrap  
WO-704 Medium Green/Brown/White Opal Wissy for Trees and Tree Line 1/2 Sq. Ft.  
WO-707 Light Blue/Dark Blue/White Opal Wissy for Lake, 1/2 Sq. Ft.  
565-L Gray Light Opal/Dark Gray for Towers and Church, Scrap  
WO-152 Yellow Green/Dark Green Wissy for Grassland, 1/2 Sq. Ft.  
EM318 Medium Olive for Foliage, Scrap  
EM343 Green for Foliage, Scrap  
EM161 Light Olive for Foliage, Scrap  
570-L Dark Gray/Light Opal for Tower and Church Roofs, Scrap  
343 Medium Green Cathedral for Foreground Trees, Scrap



## Sweet Heart

Design by Leslie Gibbs

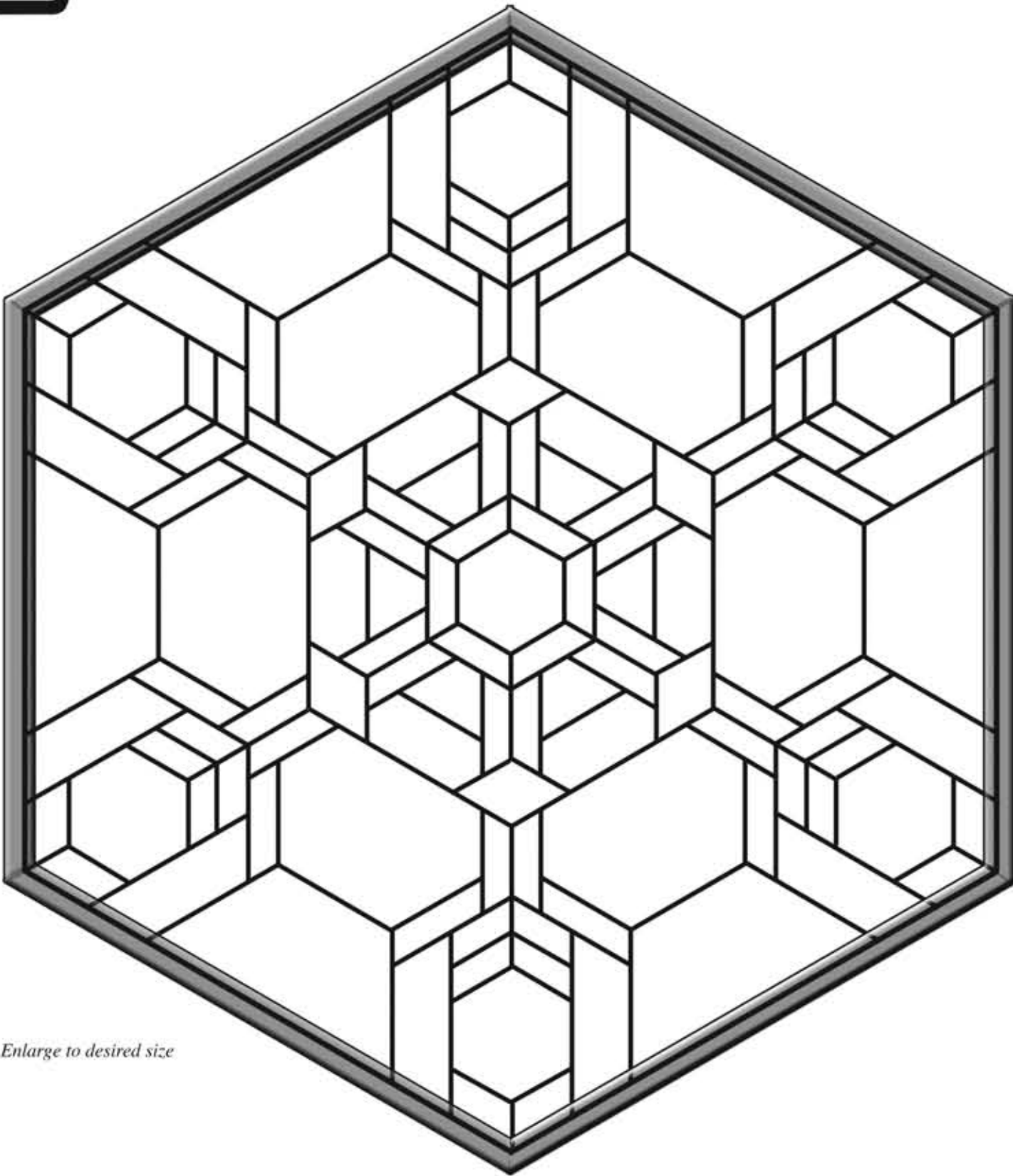
**Glass**  
Light Green Iridescent  
for Wings, Back, and Top of Head, 3" x 5"  
Cranberry Pink for Throat, 2" x 3"  
Light Aquamarine Blue for Background, 4" x 4"  
Mint Green Streaky for Chest, 3" x 5"  
**Coatings By Sandberg**  
Green/Pink Thin Dichroic for Feathered Wings, 3" x 7"



## 3-D Winter Icicles

Design by Lidia K. Anderson

**Glass**  
Clear Glass, Scrap  
Textured Glass, Scrap



Enlarge to desired size

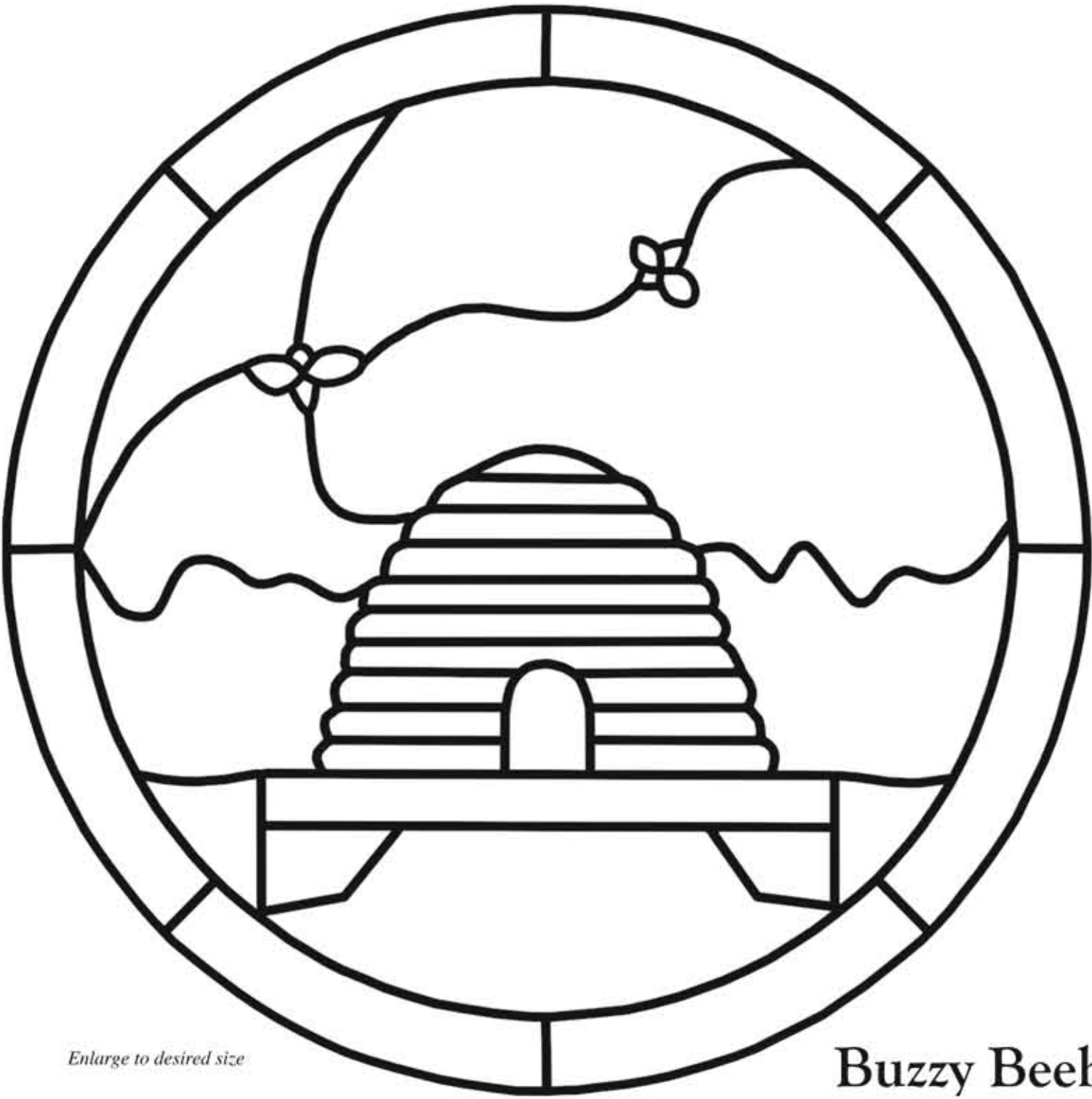


Enlarge to desired size

## Scenic Overlook

Design by Mary Harris

**Wissmach Glass Company**  
71-L Dark Brown/Green/Light Blue/Light Opal/Crystal for Deer Body, 1-1/2 Sq. Ft.  
503-L Light Opal/Dark Gray/Brown for Deer Legs, Rump, and Face, Scrap  
145-SP Dark Amber/Opal/Crystal for Antlers, Scrap  
77-L Light Brown/Yellow Green/Light Opal for Antlers, Scrap  
78-L Medium Amber/Green/Light Opal/Crystal for Landscape, 2 Sq. Ft.  
61-L Green/Brown/Light Opal/Crystal for Landscape, Scrap  
245-L Medium Amber/True Green Streaky/Light Opal/Crystal for Landscape, Scrap  
WO-59 Dark Brown/Green/Opal/Crystal Wissy for Landscape, Scrap  
155-LL Dark Purple/Green/Light Opal/Crystal Streaky for Tree Trunk, Scrap  
23-L Light Green Light Opal/Copper Red for Tree Tops, 1 Sq. Ft.  
WO-112 Dark Green/Dark Amber/Opal Wissy for Tree Tops, 1 Sq. Ft.  
238-D Dark Purple/Dark Blue/Dense Opal/Crystal for Sky, 3-1/2 Sq. Ft.



Enlarge to desired size

## Buzzy Beehive

Design by Paned Expressions Studios

## Prairie Style Snowflake

Design by Chantal Paré

**Wissmach Glass Co.**  
EMx118 Pale Blue English Muffle, 1 Sq. Ft.  
Dew Drop-01 Iridescent, 1 Sq. Ft.  
Figure C 01 Textured 1 Sq. Ft.  
Aerolite-01, 1 Sq. Ft.  
**Additional Glass**  
3 mm Clear Float Glass, 1 Sq. Ft.

**Wissmach Glass Company**  
61-L Green/Brown/Light Opal/Crystal for Background Landscape, 1 Sq. Ft.  
57-D Medium Green/Dense Opal/Crystal for Foreground Landscape, 1 Sq. Ft.  
188-L Gray Blue/White Light Opal for Sky, 1-1/2 Sq. Ft.  
145-SP Dark Amber/Crystal for Hive, 1 Sq. Ft.  
199-LL Medium Amber/Dark Amber Brown Streaky for Border and Hive Stand, 2 Sq. Ft.  
55-LL Amber/Green/Opal/Crystal Streaky for Bees, Scrap  
RIP-01 Clear Ripple for Bees Wings, Scrap

Enlarge to desired size



# Buzzy Beehive

*Design by Paned Expressions Studios, Text by Darlene Welch*

When you see bees hovering over the flowers in your garden, a stash of honey is probably not far away. This delightful 18" round stained glass panel from the *Kids Stuff?* CD pattern collection by Paned Expressions Studios will remind you of sweet bee treasures that await you.

Careful selection and placement of the glass colors add depth and interest to the scene—choosing a darker portion of the green foreground glass, for example, to give the appearance of a shadow under the hive. The various shades of amber streaky glass also provide a look of texture to the beehive and are perfect for the border and stand.

This pattern is just one of over 60 designs included on the CD for *Fairy Tales and Stories*, *Aesop's Fables*, *Nursery Rhymes*, *For the Baby's Room*, *More Childish Things for All Ages*, and *Fun Projects for Kids*. The patterns are provided as image files only, and no software is included on the CD. All patterns are provided in color and black & white in JPG, TIF, and GlassEye formats for both PC and Mac for easy resizing, reshaping, and recoloring. The patterns also cover all levels of glass skills, so there is something for everyone. Visit [www.panedexpressions.com](http://www.panedexpressions.com) for this and many other pattern collections from Paned Expressions Studios.

**GPO**



## **Wissmach Glass Company**

- 61-L Green/Brown/Light Opal/Crystal for Background Landscape, 1 Sq. Ft.
- 57-D Medium Green/Dense Opal/Crystal for Foreground Landscape, 1 Sq. Ft.
- 188-L Gray Blue/White Light Opal for Sky, 1-1/2 Sq. Ft.
- 145-SP Dark Amber/Crystal for Hive, 1 Sq. Ft.
- 199-LL Medium Amber/Dark Amber Brown Streaky for Border and Hive Stand, 2 Sq. Ft.
- 55-LL Amber/Green/Opal/Crystal Streaky for Bees, Scrap
- RIP-01 Clear Ripple for Bees Wings, Scrap

## **Tools and Materials**

- 7/32" Copper    Foil    Flux    Solder
- Black Patina    1/4" U-Channel Lead

© Copyright 2019 by Glass Patterns Quarterly™. All rights reserved.

# Cardinal in A Pine Tree

*Design, Demonstration, and Text by Lisa Vogt*



Cardinals are a bright, cheerful sight in the peaceful winter months. The colorful little fellow featured in this 8" x 10" design will bring joy to your home all season long. You'll love how fast and easy this delightful project is to make. Let's get started.

Detailed projects like this one are easier to make if you work from a pattern. Preparing the pattern may seem tedious, but the increase in accuracy and fit really improve the overall quality of your finished project. Patterns also make more elaborate designs manageable so that even the most intricate design is still fun to build.

## **96 COE Glass**

Clear for Base, 1 Sq. Ft.

Sky Blue for Sky, 1 Sq. Ft.

Flame for Cardinal, Scrap

Fern for Pine Tree, Scrap

Marigold for Bird Beak, Scrap

Medium White Frit for Snow

## **Coatings By Sandberg**

Rainbow 1 on White Dichroic Frit

## **Tools and Materials**

Pencil Scissors

ThinFire Fiber Paper

Snowflake Paper Punch

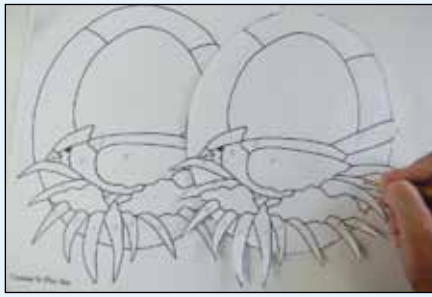
Small Paint Brush

Toothpick Fuser's Glue



1

Number the different sections of the design, then make two copies of the pattern.



Timesaver Tip: Number the pattern before making the copies. Don't be like me and forget to do it before heading to the glass studio.

2

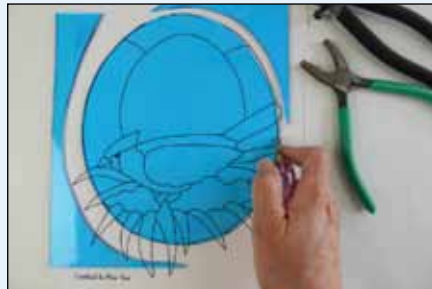
Using the pattern as a guide, cut the base layer out of clear glass.



To maintain a consistency in the thickness of the finished art, this free-form shaped project is made with two layers of glass, with the base being cut from clear glass. Cut the oval shape first. Next cut the clear pieces for the tips of the pine needles that extend outside of the oval shape. Cutting these little pieces and adding this extra step ensures that the narrow pine needles will keep their shape during firing. Without the clear base, they'll shrink disproportionately to the rest of the project and be fragile after fusing. Now that the base is cut, let's move on to the second layer.

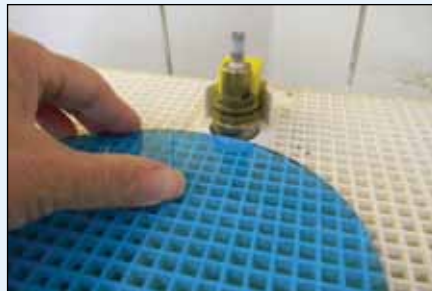
3

Cut blue glass for the sky to the same shape and size as the clear oval base.



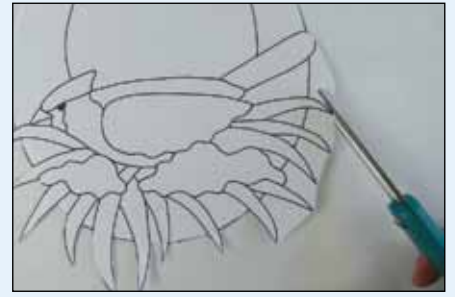
4

Grind the cut glass to remove any sharp edges and improve the shape.



5

Use scissors to cut one paper pattern into the free-form shape.



6

Draw a line around the pattern on a primed kiln shelf or on a fiber paper lined shelf.



7

Arrange the clear base pieces on the shelf inside the pencil line.



Set the shelf and assembled glass aside. Now comes the fun part—cutting the pine needles and cardinal.

8

Cut up the pattern.



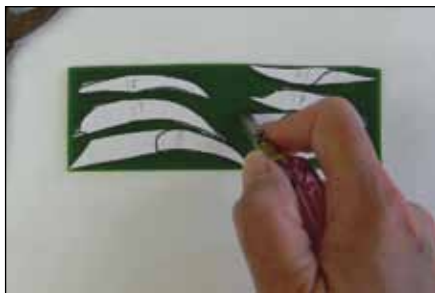
9

Glue the pine needle pieces onto the green glass with a glue stick.



10

*Cut around the pine needle pattern pieces.*



Trim as closely as possible to the edge of the pattern pieces without running into the paper. Remove any excess glass with pliers. Now glue the cardinal pattern pieces to the red glass and cut out the cardinal pieces in the same way as you did for the pine needles.

11

*Grind the cut glass pieces to improve their shape and fit.*



*Remove the wet pattern pieces from the ground glass, then clean and dry the glass with a towel.*

12



*Arrange the bird and pine needles on the spare pattern and set aside.*

13



*For a fun added detail, use a paper punch to make snowflake shaped flurries for the background glass.*

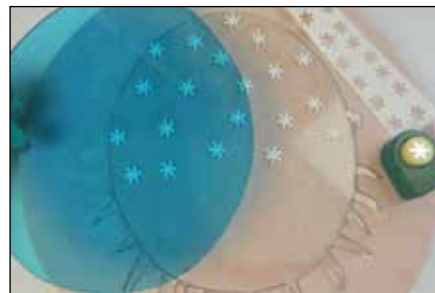
14



Press the snowflakes out of the Thinfire fiber paper and scatter them on the clear base.

15

*Stack the blue on top to seal the snowflakes between the clear and blue layers of glass.*



FYI, I have not tried this encasing technique with other fiber papers. If you use a different paper, your results may vary.

16

*Using the paper pattern and pencil line as a guide, stack the pine needles and cardinal on top of the blue glass.*



17

*Hold the pieces in place by applying a small amount of fuser's glue with a toothpick.*



This keeps the pieces from moving when you carry the kiln shelf and glass to the kiln.

18

*Spoon white frit on the pine needles to represent snow.*



19

*Use a small paint brush to clean up the top edge of the snow and sprinkle a little white frit on the blue sky.*







20

For a little sparkle, place white dichroic frit on top of the snow and on the blue sky.



21

Fire the assembled glass to a full fuse temperature using the guide at the end of the tutorial.



I love the crisp, vibrant colors of the finished piece and the extra detail that the encased fiber paper stars give to the sky. The Thin-fire got a little smaller during firing and left a delicate star shaped snowflake pattern in the background. The sparkly dichroic frit adds a little magic to this winter wonderland.

This season when you're feeling the icy chill of cold winter days, create your own warmth. Snuggle up to your kiln and make this cheery Cardinal and Pine Tree design. This pattern is just one of many seasonal delights you can make that are included in the *Home for the Holidays* book now available as a download on my website. Happy fusing!

GPQ

### Firing Schedule

Note that all kilns fire differently. Test-fire these guides in your kiln and make any adjustments as needed for your own kiln.

Segment 1: Ramp 300°F/hr to 1300°F and hold 30 min.  
Segment 2: Ramp 500°F/hr to 1465°F and hold 10 min.  
Segment 3: Ramp 9999 (AFAP\*) to 960°F and hold 40 min.  
Segment 4: Cool to room temperature.

\*as fast as possible



Lisa Vogt discovered glass while pursuing an education in fine art. For more than thirty-five years, this award-winning artist has drawn upon her fine arts background and own sense of style, drama, and whimsy to combine this historic medium with innovative glass techniques for limitless design possibilities. Her work has been on exhibit in major cities throughout the United States.

Lisa is the author of fourteen design books and a series of instructional videos in addition to frequent articles for industry magazines and fiction for publication. She also lectures at national and regional seminars and has been a featured artist on HGTV, PBS, and Glass Patterns Quarterly Webinars. A huge supporter of public art, Lisa regularly contributes artwork for auction to benefit local, regional, and national charities. Her home and studio are located north of Tampa Bay in Wesley Chapel, Florida, where she resides with her husband and two daughters. Visit [www.LisaVogt.net](http://www.LisaVogt.net) to find out more about her work and seminars.



TOOLS  
EQUIPMENT  
STEEL MOLDS  
INSTRUCTIONAL DVDS

~ built by artisans for artisans ~



WAVE MOLDS



REVERSIBLE MOLDS



INSTRUCTIONAL DVDS



FRIT  
MAKER

SIFTER/SORTER



SCONCE MOLDS



SCREEN MELTS

# The Kiln Corner

## Simple Thermocouple Repairs

by Arnold Howard

The temperature sensor in a digital kiln is called the thermocouple. The tip of the thermocouple generates a faint electric signal when heated, and the controller, in turn, interprets that signal as a temperature.

When the temperature in your controller becomes inaccurate or the temperature fluctuates during a hold, don't assume that you have to replace the thermocouple or the controller. The problem is often easy to correct without replacing expensive parts. Let's cover some of the things you can check.

*First, unplug your kiln or disconnect it from the power and find the thermocouple.*

1



The thermocouple is the small rod that extends into the firing chamber. On the other side of the kiln wall you will find a control panel or switch box. Remove that panel.

2

*Locate the place where the thermocouple is attached to the connection block.*



The thermocouple is attached to a connection block and the yellow and red wires go from the connection block to the controller. On most kilns the block is oval shaped.

3

*Pull the thermocouple out of the kiln.*



Label the four wires on the connection block so you can reinstall them correctly later. Two screws attach the thermocouple connection block to the kiln. Remove those two screws as shown and gently slide the thermocouple out of the kiln for further examination.

4

*Check the position of the pins in the connection block and replace the block if necessary.*



Turn the connection block over and look at the side that goes toward the kiln wall. You will find two pins. If those pins extend past the ceramic block, they could touch the kiln case and short out the thermocouple. It would still work, but with reduced accuracy. If the pins extend past the oval block surface, replace the block.



5

Check to see if the thermocouple wires have any damage.



When I removed the thermocouple-to-relay wires on a kiln I was repairing, I found that the wire on the left had been broken due to excessive pressure from a screw. This type of damage can be seen by removing the wires.

Loosen the four screws in the connection block, then remove and examine the thermocouple wires. Often the thermocouple will still work even with a damaged wire, but with reduced accuracy.

If the connection block is old and tarnished, either replace the block or clean the four brass holes where the wires go.

6



The thermocouple connection block shown here on the left is new. The one on the right is tarnished. Replace the connection block if it's tarnished or clean out the holes where the wires go. Clean and reinstall the wires on the connection block.

Before you slide the thermocouple back into the kiln, make sure the hole in the kiln wall hasn't become enlarged. If the thermocouple is wobbly in that hole, accuracy will be reduced, because cooler air from outside will enter the kiln and affect the thermocouple. If necessary, the thermocouple should be wrapped with a tiny amount of ceramic fiber to tighten the hole.

Reinstall the two screws that attach the connection block to the kiln. The thermocouple should extend into the firing chamber 3/4" to 1". Reinstall the control panel and check the kiln for accuracy.

GPO

© Copyright 2019 by Glass Patterns Quarterly™. All rights reserved.



Since 1977 when Arnold Howard began working at Paragon Industries, he has seen kilns evolve from switches to touch screen displays. He helped test the early glass kilns and wrote Paragon instruction manuals, newsletters, and advertisements.

Arnold has taught kiln classes at trade shows, Bullseye Glass in Portland, and in Australia and England. In September 2019, he started Howard Kilns, a repair and preventive maintenance business, to serve the Dallas-San Antonio, Texas, area. Arnold works on all brands of kilns. Feel free to contact him at [arnoldhoward@gmail.com](mailto:arnoldhoward@gmail.com).



# SilkeMat™

refractory fiber blanket

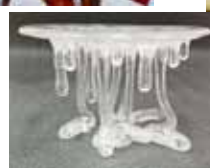
...the NON-CARCINOGENIC choice for reusable soft and rigid molds

- Vitrigraph
- Kiln Carving
- Drop Rings
- Drip Melts
- Casting
- Slumping

Use your imagination !!!



Distributors Welcome



Facebook:  
"SilkeMat Tips & Techniques"

[www.SilkeMat.com](http://www.SilkeMat.com) [sales@SilkeMat.com](mailto:sales@SilkeMat.com) 336-580-7063 Greensboro NC

## Angel Companions are back!

- 23 new stained glass patterns for the hobbyist and quilter who loves Angels like I do.
- 2nd edition is now available!

Single Autographed Copies available through  
[www.AngelGlassArt.com](http://www.AngelGlassArt.com)

Pat Chase

360-385-3457 • [ponygal67@gmail.com](mailto:ponygal67@gmail.com)

Retail distribution: Ingram Book Group LLC • Wholesale Inquiries to: Kitsap Publishing  
[info@reprospace.com](mailto:info@reprospace.com) • [KitsapPublishing.com](http://KitsapPublishing.com)



# Sparkling Snowflake

*Design and Fabrication by Alysa Phiel, Text and Photography by Jane McClarren*



**T**his gorgeous fused glass snowflake project was inspired by those of us who live in the desert and crave anything this time of year that resembles cold weather. A lot of folks who now live in the sunny state of Arizona, with its hot summers and mild winters, were once located in parts of the country that are farther north, where snow abounds in winter. I can certainly appreciate the twinge of nostalgia they feel when December rolls around again, and they begin to wish for at least one good snowstorm for Christmas. I lived in the Chicago area for 35 years myself before moving to Arizona 24 years ago, so snowflakes are all I want to see as we head into the winter months. I hope you enjoy these fused beauties no matter where you are.

There are two versions of this snowflake. The solid snowflake requires seven and a half sets of the components. The more pointed one only requires five sets. We suggest you make eight components in order to have some options on how to arrange them. Embellishment of the snowflakes is only limited by your imagination, since just as in nature, no two will be exactly alike.

## **96 COE Glass**

Clear, 4" x 12"

Translucent Blue Glass with Wispy Designs in 3 Shades

Clear Dichroic, 2" x 4"

## **Options for Embellishments**

Murrine Slices

Pebbles or Nuggets

Clear Dichroic (optional)

## **Tools and Materials**

Glass Cutter Protective Eyewear

Running Pliers Clear Gel Glue

Kiln Paper or Prepared Kiln Shelf

Morton Cutting System



## Creating the Components

Using the Morton System, cut 8 squares for each of the 3 different Transparent Blue and the Clear Dichroic glasses.

1



Cut 8 glass squares for each of the following: 2" squares for color #1; 1-1/2" squares for color #2; 3/4" squares for color #3; 1-3/4" and 1" squares for the clear glass; and 1/2" squares for the clear dichroic.

2

Arrange the eight 2" squares on the kiln paper or kiln shelf and apply a drop of clear glue to the center of each square.



Allow a minimum of 1" of space around each square.

3

Build the 8 tiles.



Center a 1-3/4" clear glass square on each 2" base square. Continue building the 8 tiles in order: Color #1, 1-3/4" Clear; Color #2, 1" Clear; Color #3. Be sure to press down on each piece of glass after adding it to the stack to be sure it is adhered, since we don't want the squares floating out of their stacks as they fuse.

When adding the dichroic to the pile, it is important for the top piece of dichroic to be added to the stack with the dichroic side facedown. If your dichroic is textured, the dichroic side is easy enough to figure out. Fire the tiles using the full fuse firing schedule at the end of the tutorial.

4

With the flat side of the tile down, cut each tile in half with the glass cutter.



Your cut doesn't have to be perfect, since we will be fusing the halves together.

5

Gently tap the underside of the glass tile with the glass cutter below the score line you created.



While tapping the glass tile, hold the glass cutter backwards with the metal screw (where you put the oil) upright. Continue to tap from the edge of the score line to the other side until the tile breaks for you. Continue with each tile, making sure to keep them in pairs.

6

Apply a drop of glue to the flat side of one tile in a pair and align the tiles with the flat sides together.



Set the tile pair aside with the cut side down and allow the glue to dry. Repeat with the 4 additional pairs. You will need 5 glued sets for either snowflake design.


7

Once the 5 tile pairs have dried, arrange them in a starburst pattern, cut side down, on a piece of kiln paper or a prepared kiln shelf.



There are two versions of the snowflake, each starting with the starburst pattern. Either version can be built up and embellished in any way you desire.





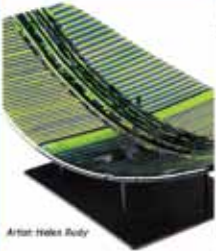


Quality Service from People Who Care.

- ✓ 18,000+ Products
- ✓ Superior Service
- ✓ Online Shopping
- ✓ Art Glass Classes
- ✓ World Wide Shipping

KILN FORMING

STAINED GLASS

TORCHWORK

Shop Now!

**dlartglass.com**

303.449.8737 • 800.525.0940

Fuse the snowflakes using the suggested full fuse schedule at the end of the tutorial.

GPO



### Full Fuse Schedule

Remember that all kilns fire differently, so you may need to make adjustments to the schedule below to fit your own kiln.

Segment 1: Ramp 100°F/hr to 300°F and hold 15 min.  
 Segment 2: Ramp 150°F/hr to 1050°F and hold 10 min.  
 Segment 3: Ramp 250°F/hr to 1450°F and hold 1 min.  
 Segment 4: Ramp 9999 (AFAP\*) to 950°F and hold 90 min.  
 Segment 5: Ramp 100°F/hr to 800°F and hold 10 min.  
 Segment 6: Ramp 300°F/hr to 100°F and no hold.  
 \*as fast as possible

### Snowflake A

Arrange the single cut tiles between each spindle of the starburst with the flat side facing out. Apply drops of glue to the center, then add a glass pebble to each corner for a tip.



### Snowflake B

Arrange glass pebbles or murrine slices inside the spokes and onto the end of each spoke to embellish the design. You can add just a few or add larger clusters to create a more elaborate pattern to your design.



*Alysa Phiel, a regular contributor to Glass Patterns Quarterly™ since 2012, is a third-generation glass artist with 30 years of experience having been taught by her grandparents, longtime glass artists who owned their own studio for 12 years. Alysa then owned and operated Creations in Glass with her mother for 10 years. She has also shared beginning to advanced classes with hundreds of students over the past eight years as the Director of the Warm Shop at Sonoran Glass School in Tucson, Arizona.*

*Recently Alysa opened her own studio, Wild Desert Glass, where she continues to create custom projects in addition to offering instruction in fused glass, stained glass, and mosaics. The artist's creativity and range of knowledge make her a fantastic teacher for students looking to create any type of glass art. She constantly experiments with new techniques and materials and helps others challenge themselves and expand their own skills as artists.*

*Alysa's work, which ranges from fused functional pieces and wall art to mosaic furniture and fountains, can be found in private collections all over the country. She also has numerous commissioned stained glass windows installed in homes and churches all around Tucson.*



**Collect All 24 CD's  
Now over 2200 Patterns**

**Paneled Expressions Studios**

**"Nature's Bounty - 1"**  
all patterns in this set & are done  
for personal use only & may not be  
reproduced or sold for profit

**Paneled Expressions Studios**

**Parents  
Our Favorite Patterns**

Patterns in .JPG, .GIF, .TIF, & .EPS formats for  
use with Macintosh & all PC compatible hardware

All patterns in .JPG, .GIF, .TIF,  
& .EPS Formats  
[www.paneledexpressions.com](http://www.paneledexpressions.com)  
Visit our site for individual  
downloadable patterns!






All patterns in JPG, TIF,  
& EYE Formats  
[www.panedexpressions.com](http://www.panedexpressions.com)  
Visit our site for individual  
downloadable patterns!



toyosupercutters.com

David Kennedy  
Stained Glass Designs

Original Designs  
PDF Digital Patterns  
visit  
KennedyStainedGlass  
on Etsy



Also available at  
[kennedyoriginalstainedglass.com](http://kennedyoriginalstainedglass.com)



Original Designs  
PDF Digital Patterns  
*visit*  
KennedyStainedGlass  
on Etsy



Also available at  
kennedyoriginalstainedglass.com

Playing  
in studios  
everywhere!

# STANDING ROOM ONLY!

## No bending with an Olympic SRO

Square, Rectangle, Oval Glass Fusing Kilns with tall stands

Get the hottest ticket in town!

Featuring an all-star cast of Olympic Square, Rectangle and Oval models available in multiple sizes with tall stands. Visit [greatkilns.com/glass-firing-kilns/glass-firing-square-rectangle-oval-kilns-240-208-volt.html](http://greatkilns.com/glass-firing-kilns/glass-firing-square-rectangle-oval-kilns-240-208-volt.html) to see all the great models available.

# OLYMPIC KILNS

[www.greatkilns.com](http://www.greatkilns.com)

800.241.4400 • 770.967.4009

sales@greatkilns.com

solutions@greatkilns.com

800.241.4400 • 770.967.4009  
sales@greatkilns.com  
solutions@greatkilns.com

# Sizzle Stix Puzzle Pendant

Design, Fabrication, and Text by Susan McGarry



This is a quick and easy project. It can be made in one firing, so it will be ready for that special night out or as a gift for a special friend in a flash. Sizzle Stix pack a lot of color in a small package. Once you learn the technique, try making larger pieces. I hope you enjoying making these colorful puzzle pendants.

To begin, you'll need to cut the black glass piece to your desired size for the pendant base. Then it's time to cut the Sizzle Stix to size.

## Bullseye Glass Co.

1101-067 Rainbow Sizzle Stix for Design  
1101-037 Rainbow Sizzle Stix for Design  
100 Black for Base, 1.5" x 1.5" and 1.125" x 1.5"

## Tools and Materials

Glass Glue or Hair Spray  
Tweezers Glass Nippers  
Bail E6000® Glue  
Chain or Cord for Hanging

2

Place the Sizzle Stix pieces on the black glass in a random pattern.



It's much like a puzzle deciding how to design your piece. In my examples, I have used the wider 1101-067 Sizzle Stix on the larger piece of black glass and the smaller 1101-037 Sizzle Stix on the smaller piece of black glass. You can also combine the two sizes of Sizzle Stix on each piece.

The dichroic coating is only on one side of the Sizzle Stix. You can design your pendant with the coating side of the pieces all up, all down, or a with a mixture of the two. It's a personal preference.

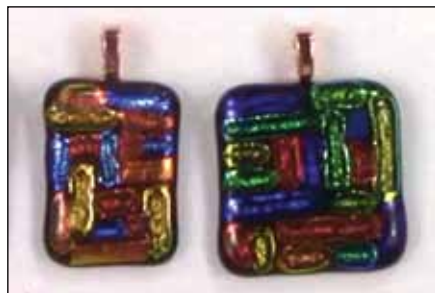
1

Measure the Sizzle Stix to your desired lengths and use the glass nippers to cut them into small pieces.



3

Fire the pendant to a full fuse.





Use the following fusing schedule to full-fuse your pendant. Since these are very small pieces, you can fuse them very quickly. For larger pieces, use a much slower schedule and include an annealing segment. Remember that all kilns fire differently, so you may need to make adjustments in the schedule for your own kiln.

Fire the pendant at 500°F per hour to 1450°F and hold for 10 minutes. Turn the kiln off and allow it to cool to room temperature before opening the kiln.

4


Glue bails onto the pendants for hanging.



I use E6000 to glue my bails. It's quick and strong if you do it right. First I use a rotary tool to rough up a small area where the bail will be placed. Next I place a small amount of E6000 on the pad of the bail. Attach the bail to the pendant and press it down for at least 15 seconds. Clean off any excess glue that has squeezed out.


After 24 hours, place the pendant in a 275°F oven or kiln for 20 minutes. Allow it to cool before wearing. Now add your favorite chain or cord, and it's ready to wear.

GPO



## Unique Glass Colors

Manufacturers of Kiln Fired Glass Colors,  
MUD, Glass Separator, FREE, ACCENTS,  
Layering Mix and Detail Colors.



**Details over Poured NT Enamels**

info@uniqueglasscolors.com   uniqueglasscolors.com

407.261.0900   Fax: 407.331.0900

*Susan McGarry has been passionate about glass since her first glass class and has exhibited her fused glass jewelry and artwork in shops throughout the United States and Ireland. She teaches through tutorials, books, webinars, live classes, and Facebook Live broadcasts.*



*The artist combines colors in a unique way to create one-of-a-kind designs and feels that working with glass is exciting and challenging, and that it taps into the imagination for creating something new. In 2012 she started her business, ArtiFill.com, manufacturing molds and jewelry findings for artists and crafters.*

*Susan was born and raised in southern California. Her home and glass studio are now north of the San Francisco Bay area. You can find Susan McGarry Glass at [www.facebook.com/SusanMcGarryGlass](https://www.facebook.com/SusanMcGarryGlass) as well as on Instagram.*



LISA STIERETT

## Glassy Cuts



**FLOAT GLASS FRIT (COE 82 +/- 3)**

TONS OF COLORS AND SIZES



**PRE-CUT CLEAR FUSIBLE  
GLASS SHAPES**

**READY FOR YOU TO ADD FRIT AND FUSE.**

OVER 100 DIFFERENT SHAPES!  
VARIETY OF SIZES

(360) 613-5472

WWW.GLASSYCUTS.COM



## 2020 GAS ANNUAL CONFERENCE SMÅLAND, SWEDEN

MAY 20-23, 2020

Visit [www.glassart.org](http://www.glassart.org) for more details!



**GAS™**

2208 NW Market St., Suite 200  
Seattle, WA 98107  
206.382.1305 • [www.glassart.org](http://www.glassart.org)



## What's New



**Wissmach Glass Company** presents **Wissmach 96™ frit**. Available in 20 colors, the frit comes in fine, medium, coarse, and mosaic and can be purchased in 16-ounce and 4-pound containers. Colors that are currently available include clear, black, and white plus assorted shades of violet, green, blue, red, and gold. Wissmach began making 96 COE frit in 2017 and has plans to continue adding more colors. Ask your supplier for these beautiful Wissmach 96 Glass Frits and visit the company's website for more details.

304-337-2253 [wissmach@frontier.com](mailto:wissmach@frontier.com)  
[www.wissmachglass.com](http://www.wissmachglass.com)

**Hoevel Manufacturing**, which has been in existence for over 40 years, is excited to announce the company's **new website**. Now up and running, it's a great place to find time-saving products for stained glass artists. The Hoevel product line has gone through many name changes over the years, but the quality of its stained glass products created by Herle Diegel, the company's founder, has remained the same. Hoevel Manufacturing offers the Diegel products including the Diegel Foiler and the Kwik-Crimp Burnisher, which burnishes both sides of the foil at the same time, plus Kwik-Clean Flux and Patina Cleaner and Color Magic nonfiring permanent glass and metal paint. For more information about Hoevel and its amazing products, visit the company's website.



310-313-6829  
[www.hoevel.com](http://www.hoevel.com)



**Anything in Stained Glass** presents **Breda Mosaic Nippers**. These nippers are made for artists who

are looking for a lightweight, comfortable tool for nipping glass for mosaics. They are made from aluminum and feature high-quality carbide blades that multiply your force by five times while keeping your wrist at a safer angle to help avoid repetitive stress injuries. Breda Mosaic Nippers also have a numbering index on the blades so you know how many times you have rotated them and are fully reversible for both right- and left-handed use. Visit the company's website for more information on this great product.

800-462-1209 [supplies@anythinginstainedglass.com](mailto:supplies@anythinginstainedglass.com)  
[www.anythinginstainedglass.com](http://www.anythinginstainedglass.com)

**Victorian Art Glass** has new **Master Artisan Steel Wave Molds** that are made from heavy-duty stainless steel to withstand multiple firings. The molds come in two sizes, 6" x 12" and 12" x 16". The molds can be used with kiln wash, boron nitride, or covered with kiln paper. Visit the Victorian Art Glass website or contact the company for more information on these great new molds.



2503829554 [sales@vicartglass.com](mailto:sales@vicartglass.com)  
[www.vicartglass.com](http://www.vicartglass.com)



**AAE Glass**, providers of glass art education, inspiration, and supplies, now offers **SilkeMat™**, a noncarcinogenic fiber blanket that can be cut, molded, rigidized, and formed. It can be used with and without rigidizing. Although a high-grade boron nitride separator could be used for art glass firings, AAE has not found this to be necessary. There is also no "shot" in this product, which comes in 24" x 24" x 1/4" and 12" x 12" x 1/4" sizes. Most firings are clean, leaving only the texture of the fiber on the glass. Visit the AAE Glass website for more details on this remarkable product.  
239-471-7724 info@aaeglass.com  
www.aaeglass.com



**Glass Patterns Quarterly™** makes it easy with **Glass Expert Webinars™** to learn glass art techniques from the industry's top artists and instructors without ever leaving home. There's nothing quite like getting immediate answers from the instructor via live chat while experiencing the fun and synergy of learning and growing with a group of your fellow glass art lovers. Purchase of the live class also includes a link to a recording of the class event that never expires. The magazine has planned an upcoming schedule for 2020 just waiting to present a wide variety of glass techniques including: Vitrigraph Techniques with Dennis Brady (Jan. 7), Fused Glass Sculptures with Lisa Vogt (Jan. 14), Fusing with Tempered Glass with Tony Glander (Jan. 21), Cutting Glass with Joe Porcelli (Jan. 28), and a Selling Your Work lecture with Dennis Brady (Jan. 30) plus many more throughout the year. Visit the Glass Expert Webinars™ link on the magazine's home page for a complete listing of upcoming webinars.  
502-222-5631 info@glasspatterns.com  
www.glasspatterns.com

**Glass Patterns Quarterly™** offers a fabulous collection of links to its **Recorded Webinars**. If you missed a live webinar event, **Glass Expert Webinars™** you can purchase a link to the recorded version that never expires and watch it whenever you like, wherever you like. There are currently 49 recordings covering a wide variety of hot, warm, and cold glass techniques available from renowned artists and instructors including Dennis Brady, Lisa Vogt, Harish Dewani, Gil Reynolds, Jackie Truty, Joseph Cavalieri, Lewis Wilson, Kent Lauer, Corina Tettinger, Margot Clark, and many others. For a complete list of available recordings, visit the Glass Expert Webinars™ link on the GPQ home page, then go to the Recorded Links section to find current offerings. You'll also want to check back often for new additions.  
502-222-5631 info@glasspatterns.com  
www.glasspatterns.com

**GPQ**

### Send your What's New information to

Glass Patterns Quarterly™  
8300 Hidden Valley Road,  
P.O. Box 69, Westport, KY 40077  
info@GlassPatterns.com

Due date for Spring 2020  
January 20, 2020

# Covington Sanders

*The Gift that  
Grinds & Shines*



*Order Today!*

**877.793.6636**



**www.covington-engineering.com**

## GLASS PATTERNS — Q U A R T E R L Y —

GPQ would like to wish everyone the very best as we enter this holiday season!

Thank you for all of your support and encouragement during the past 36 years.

Make sure to thank the advertisers  
who continue to make  
*Glass Patterns Quarterly™* possible!



Season's Greetings  
Maureen, Darlene, Rhonda, Kathy  
Jennifer, Dave, and Mark



# Amaryllis

Design, Demonstration, and Text by Chantal Paré

*“Give me kind Amaryllis,  
the wanton country maid.  
Nature art disdaineth;  
her beauty is her own.”  
—Thomas Campion*

There is nothing like an amaryllis bulb to brighten our winters and fill us with childlike wonderment. From its humble beginning in a small pot, helped by warmth and sunlight, a stem begins to emerge and grows at an astonishing speed. With leaf growth still lagging far behind, four large buds break out of the top of the stem and open into a spectacular, oversized floral display. While the real flowers last about a week, this glass counterpart brings amaryllis magic year-round.

I have opted to enhance this panel with glass painting. If you do not have access to the required materials and equipment, the project will also turn out well without the painting. Stamens at the center of the central flower can be made out of foil overlay or with wire accents.

Don't let the name of the Wissmach Light Orange throw you off. It's a brilliant red with only a tinge of orange shift. It's a favorite in my studio.





### Wissmach Glass Co.

18 H Light Orange Hammered

for Flowers and Bottom Inner Border, 1 Sq. Ft.

EM4931 Dark Copper Blue English Muffle

for Outer Border, 1-1/2 Sq. Ft.

DR319 Dark Yellow Green Double Rolled

for Stem, Leaves, and Top Inner Border, 2 Sq. Ft.

Aerolite-01 Clear Aerolite for Bottom Inner Border, Scrap

### Spectrum

110.8A Medium Amber Artique® for Background, Scrap

### Youghioghny

1000 SP Stipple for Borders with Bevels, 2 Sq. Ft.

### Additional Glass

1" Square Bevels for Background and Border Accents, 18

3 mm Float Glass for Mixing Paint, 2 Sq. Ft.

### Tools and Materials

Reusche Stencil Black #1059

Gum Arabic 1/2" U-Came Zinc

60/40 Solder Soldering Flux

3/16" Black-Backed Copper Foil

14-Gauge Pretinned Copper Wire

Glass Cooktop Cleaner Towel

Masking Tape or Electrical Tape

Liner Paintbrush Badger Brush

Stiff Blunted Hog Hair Brushes

Palette Knife Kiln Fid

Light Box Came Miter Saw

Whiting (Calcium Carbinat)

Carbide Wheel Glass Cutter

Glass Breaking Pliers

1

Trace the pattern onto the glass.



Print a single copy of the pattern. Using light box illumination, individually trace the pieces onto the glass with the glass flat side up.

2

Score and break the glass.



One cut at a time, score the glass just inside the marked lines, then break off the pieces until they are all separated.

3

Grind the pieces for a perfect fit with the pattern using an electric grinder.



4

Clean the glass.



Place your glass on a towel, squirt some glass cooktop cleaner on the surface, and scrub vigorously over the entire surface. **Note:** *This step is crucial* to remove any water-repellent residue that contaminates glass from the manufacturing/handling process.

5

Prepare the glass paint on a piece of float glass.



Drop one heaping tablespoon of Stencil Black paint powder onto the float glass and sprinkle it with gum arabic the size of a pea. Add water a little bit at a time, mixing with a palette knife, until the slurry reaches the viscosity of heavy cream.

6

Paint the black design areas on the pattern.



Against backlighting, trace with paint using a liner brush. Allow the paint to dry.

7

Refine your painting by scraping off any unwanted paint with a wooden fid.



You could also use a paintbrush with its distal end made into a point with a pencil sharpener.

8  
*Carefully place your glass in the kiln on primed shelves and fire using the suggested schedule.*



Do not exceed 1050°F, which is well below recommended firing temperatures for tracing black, because the 1000 SP glass will turn opaque and milky white. Remember that all kilns fire differently, so you may need to make adjustments for your own kiln.

Segment 1: Ramp 550°F/hr to 900°F and hold 5 min.  
Segment 2: Ramp 9999 (AFAP\*) to 1050°F and hold 10 min.  
Segment 3: Ramp 50°F/hr to 986°F and no hold.  
Segment 4: Ramp 9999 (AFAP\*) to 950°F and no hold.  
\*as fast as possible

After the kiln finishes the program, let it to cool to near room temperature before opening.

9  
*Prepare a matte layer.*



Prepare to matte your pieces as in step 6, but using less gum arabic, this time the size of a peppercorn, and more water. Apply this slurry to the glass with an ordinary paintbrush that is about 1" wide. Aim for only 10 percent transparency. Spread evenly with very light brush strokes back and forth with a badger brush. Allow to dry.

10  
*Reveal the shading.*



Remove some of the matte by tapping with blunted, stiff hog hair brushes to create brighter areas, leaving only the shading.

11

*Return the pieces to the kiln.*



Be mindful not to touch the matte, since it comes off easily. Use the same firing schedule as in step 8. If you have chosen different, less sensitive glass than the 1000 SP for your project, adjust the maximum temperature according to the manufacturer's recommendation for this second firing.

12

*Wrap all the edges of the glass pieces with copper foil.*



Crimp the foil down with a fid or the side of small scissors.

13

*Prepare a jig using a carpenter square to ensure perfect corner angles.*



14

*Tack-solder the project.*



Brush small areas with flux, then tack-solder the edge pieces against the jig to ensure that the panel has straight edges. Use widely spaced drops of solder to hold the glass in place. Be sure to work slowly and carefully, centering each piece of glass on the corresponding space on the pattern. This will ensure that the geometric areas of the design have straight lines and consistent angles.



15

*Solder both sides of the panel.*



Solder one side making a nice bead over every joint. Stop short of beading the project's outer edges to leave room to slip on the zinc frame. Remove the jig around the project and turn the panel over to solder the other side.

16

*Cut the zinc U-came frame pieces with a came miter saw.*



Taking careful measurements, prepare 4 sides of zinc U-came, cutting with a manual or electric miter saw.

17

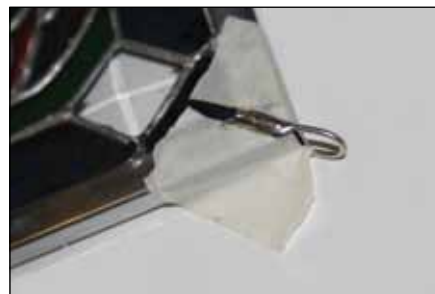
*Tack the frame sides to the project.*



Soldering on zinc requires more flux and more heat than what is required for lead. Brush each area where a lead line abuts the frame with flux, drop a bit of solder on the zinc near the junction, and melt the solder until it reaches the lead line.

18

*Solder the frame corners.*



Use masking tape as resist to ensure straight solder edges at the corners. Fold over two 1-1/2" lengths of pretinned 14-gauge copper wire. Nestle the bent pieces of copper wire inside the top joints to serve as hooks.

19

*Apply whiting to the panel.*



Do not use chemical patina on painted glass. Instead, generously sprinkle whiting (calcium carbonate) and brush vigorously with a burnishing brush to patina the lead came and joints until they become medium gray. With time, the lead will continue to naturally darken. To finish, scrub your project with glass cooktop cleaner and rinse away the cleaner with water.

GPO

© Copyright 2019 by Glass Patterns Quarterly™ .  
All rights reserved.

*Two decades ago, Chantal Paré quit the fast-paced world of molecular biology to devote herself to the full-time pursuit of glass. She's liable to melt it, blow it, break it, paint it, or cast it, sometimes just to show it who's boss. Nothing else comes close to creating an object through which light can pass the same way it does through water.*

*In her free time, Chantal draws patterns in a variety of styles ranging from Victorian to geometric and self-publishes them on the Internet. Lately, she's concentrating her efforts on glass painting.*



## The perfect Gift!

Give the gift that allows your artisan to truly create. This foiler can use up to 8 different sizes of foil for complete creativity. This foiler can be used by left-handed and right-handed artist. This foiler can center or off-center the foil to the glass. It will cut foiling time in half.

### Diegel Foiler<sup>®</sup>



[www.Hoevel.com](http://www.Hoevel.com)

# Starfish Reactive Tray

*Design, Fabrication, and Text by Lisa Stirrett*



Oh, the joys of working with float glass! More and more glass artists are discovering the endless benefits and possibilities offered by using what is commonly known as window glass in their creations. The difference between float glass and art glass hides within how the glass is made. Unlike art glass, float glass is made with a small amount of tin only on one side. This tin, combined with certain float frit colors, creates amazing reactions that you will not find with art glass. Float glass also costs much less than art glass and is often even available free as scrap.

There are so many different techniques that make working with float glass sheet and frit very rewarding. The custom reactive technique presented in this tutorial will help you create a fun and crowd-pleasing tray. Products from Glassycuts.com will make the process fun and easy.



**Glass**  
Window Float Glass, 8" x 8" (2)  
**Glassy Cuts.com**  
System 82 Float Glass Precut Shapes  
Starfish

System 82 Float Glass Frit  
Amber 0 Powder  
Amber Size 4  
Medium Size Giblets  
**Tools and Materials**  
Kiln Shelf Paper  
Copper Mica Fine and Medium Enamel Sifters  
CRL UVG4 Tin Side Detector  
Sharpie® Marker Pencil Writer  
8-1/2" x 8-1/2" Square Slumping Mold

*Gather all of your supplies, then clean both sides of the 8" x 8" float glass and the starfish shape.*



After you have cleaned the glass, you will need to find the tinned side of the float glass pieces. Only one side of the glass has the metal tin, and you cannot see it with the naked eye. Use the tin finder detector and a Sharpie marker to find and mark the tin side of the glass, which is the one that glows from the ultraviolet light of the tin finder detector. The side that does not have tin will not glow.

Finding the tin side is significant, because we will be using both sides of the glass to create a reaction, a beautiful blue patina look that is unique to the use of float glass and Amber frit.

*Place one of the 8" x 8" float glass pieces in the kiln and trace the starfish shape onto the second 8" x 8" float glass sheet.*



Place one of the 8" x 8" sheets in the kiln on kiln shelf paper, tin side up. Start with the second 8" x 8" float glass sheet tin side up. Place the Glassy Cuts float glass starfish, tin side down, on top of the 8" x 8" sheet. Lightly trace the starfish onto the second piece of glass with a Sharpie. The marker will burn off in the kiln. Remove the starfish and set it to the side.

*With a large sifter, lightly dust the Amber 0 powder all over the glass.*

3



Sift the powder so lightly that you can hardly see it. This will give a golden look to the tray. Too much and your tray will be less golden and more amber in color.

With the medium size sifter, sift the Amber 0 powder a little heavier around the edges, undulating in and out to make the tray feel like the shoreline. Sift only enough powder for you to follow as a guideline.

*Use the medium sifter to gently dump small mounds of Amber 0 powder around the edges of the glass.*

4



By dumping material into these areas, there will be high and low areas, with some frit mounds thicker than others.

*Fill in the starfish with taller and heavier mounds of the Amber 0 powder.*

5



These mounds will be part of creating the reaction we are looking for. *Note:* To avoid wasting product, clean your workspace of the excess Amber powder and place it back into the jar. Make sure not to add fingerprints to the project while moving it.

*With your fingers, sprinkle Amber size 4 frit around the edge of the glass on top of the powder mounds.*

6



Add the frit to the starfish as well. Some frit may sprinkle onto the middle of the glass. That is okay, but don't let too much get loose on your piece or it may be more spotted than you like.

*Note:* If too much sprinkles out, use tweezers or lightly wet your finger to pick up the excess. The wet finger trick also works if the powder spills onto an area where you would not prefer the frit to be.

With a pencil writer, apply copper mica in swirl patterns on the starfish and all around the edge of the tray.



Add the starfish shape, then decorate the piece with the giblets.



Place the Glassy Cuts starfish, tin side down, on top of the powder mounds. To finish, sprinkle the medium size Glassy Cuts giblets around the edge of the tray on top of the mounds. You can also create your own giblets by crushing scrap float glass and using the smaller pieces.

*Note:* Giblets are made from ground up float glass. Because the float glass has tin on one side, the giblets also have tin on one side. It's a toss-up on which side of the the giblets will fall onto the powder. The side with the tin will have a reaction, and the side without will not. I chose to be surprised!

The reaction happens because the amber frit is sandwiched between two pieces of glass where one is tin side up and one is tin side down. Also note that when sprinkling the giblets around the edge, you want to have big enough pieces that will show the reaction, but don't let them hang over the edge.



Fire the tray.

This photo shows the piece after the first firing. You could stop there, but if you prefer, continue with a second slump firing using the 8" x 8" square slumping mold to finish the tray. Here are the suggested full fire and slumping schedules. Remember, though, that each kiln fires differently, so you may need to adjust the schedule for your kiln.

**GPO**

### Float Glass Firing Schedule

Segment 1: Ramp 600°F/hr to 1510°F and hold 10 min.  
Segment 2: Ramp 9999 (AFAP\*) to 1050°F and hold 30 min.  
Segment 3: Ramp 100°F/hr to 850°F and hold 15 min.  
Segment 4: Ramp 9999 (AFAP\*) to 100°F and end.  
\*as fast as possible

### Slumping Schedule

Segment 1: Ramp 300°F/hr to 1300°F and hold 10 min.  
Segment 2: Ramp 9999 (AFAP\*) to 1050°F and hold 45 min.  
Segment 3: Ramp 75°F/hr to 850°F and hold 20 min.  
Segment 4: Ramp 9999 (AFAP\*) to 100°F and end.  
\*as fast as possible



Since 1988, Lisa Stirrett's goal has been to create beautiful works of art that impact and inspire. Her work has evolved over the years, and the different mediums she has mastered have lent themselves to creating interior and exterior art for personal, public, and commercial use.

For the last 20 years, Lisa has been working primarily with float glass and continues to push the envelope, coming up with new and innovative ideas. There are so many reactions resulting from layering and striking combinations that the possibilities are endless. These techniques have given her the opportunity to create original works for communities, both locally and globally.

Lisa's motto with her clients is, "If we can think it, we can make it." She is inspired daily by the nature of the world around her, the splendor of the oceans, wildlife, and ancient history. These ideas meld into much of her work in an elegance that is suggestive and organic. It is Lisa's greatest joy to create relative, meaningful, and inspiring works of art.





# Watch it Now!



**Start Fusing Today!**



**Downloadable videos and eBooks are here.**

**SHOP [www.LisaVogt.net](http://www.LisaVogt.net)**

## EDCO COPPER FOIL

**HOLDING IT TOGETHER FOR GENERATIONS TO COME!**

Look for the gold circle blue letters and it's in the bag.

- Excellent Quality
- Exact Tolerance
- Dead Soft Copper
- Best Tack and Adhesive
- Black Coated & Silver Coated
- Vinyl & Paper Sandblast Resist



- All copper foil can be cut 1/8" up to 35".
- Customer names can be printed on the bags of foil free of charge.
- All of our sandblast resist can be slit from 1/8" up to 24".
- Wider rolls of copper can be cut with craft shears for different designs.

(866) 397-4777

(718) 788-8108

Jean Beaulieu offers stained glass pattern books in a multitude of themes for glass enthusiasts from beginner to expert, age 9 to 99.



Visit his online store for a complete listing of available patterns.

(819) 383-1681

[jeanbeaulieu@vitraux.ws](mailto:jeanbeaulieu@vitraux.ws)

**[www.jeanbeaulieu.com](http://www.jeanbeaulieu.com)**

**Helpful. Informative. Supportive.**

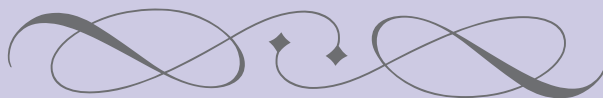


It is our goal here at HIS Glassworks to be your support structure in accomplishing your goals as an artist and fabricator. From the highest quality coldworking tools available; to expert advice and support. We're here for you and your work. Drop by our website and have a look around. Let us help assist you in your work.

HIS  GLASSWORKS

2000 Riverside Drive Suite 19  
Asheville NC 28804 USA  
828 254 2559 or 800 914 7463  
[hisglassworks.com](http://hisglassworks.com)

**[www.GlassPatterns.com](http://www.GlassPatterns.com)**



# Embossed Glass

## Choosing Your Own Drawing to Create Personalized Glass Art

*Design, Demonstration, and Text by Dennis Brady*

Photography by Jason Brady

If you're looking for ways to personalize your home decor or make a gift for a favorite someone, this embossed glass project may be just the thing to help you create a splendid piece of art that fills the bill. This project allows glass enthusiasts the opportunity to select a favorite drawing for the design. If you've gathered everything you'll need and cut your glass pieces to the correct size, let's get started.



### **96 COE Glass**

Clear Glass, 12" x 12"

Amber Glass, 12" x 12"

### **Tools and Materials**

1/8"-Thick Ceramic Fiber Paper

Carbon Paper    Design Drawing

Box Cutter or Stencil Knife

### **Optional Materials for Extra Decorations**

Fiber Paper    Shallow Mold

Thick Kiln Wash Paste

Cake Decorator

1

*Prepare the design you have chosen and transfer it onto the fiber paper.*



Cut the fiber paper to size. You can use any thickness you prefer. This project was done with 1/8"-thick ceramic fiber paper.

With the smoothest side of the fiber paper facing up, place the carbon paper on top of the fiber paper. Prepare a drawing of your desired design and place it on top of the carbon paper.

With pen or pencil, draw along the pattern lines to carbon the pattern onto the fiber paper. Press firmly to be sure it transfers the pattern. You may have to hand draw some parts of lines after you're finished that didn't completely transfer through to the fiber paper.



With a box cutter or stencil knife, cut out the parts of the pattern you want to be embossed.

2



Cut with a smooth, even pressure the same as you would when you are cutting glass. Leave pieces between the cutouts that are at least as wide as the fiber paper thickness. Be careful not to cut out so much of the stencil that it won't stay in place.

3



Place the stencil on the kiln shelf.

4



Place the glass on the stencil and fire the project.

The project shown here was done with a layer of clear glass capped with a layer of amber glass. If you choose to use a single layer of glass instead, fire to 1360°F tack fuse temperature and hold for 20 minutes.

When firing a single layer, you don't have to use fuse-tested glass, which will allow you to use lower cost art glass. Firing to a lower temperature also produces a less pronounced embossing with more subtle variations. If you fire single layer glass to higher full fuse temperatures it will distort badly, since the glass migrates to become 1/4" thick.

## Firing Schedules

For a single layer firing use the following schedule, remembering that you may need to make adjustments to fit your own kiln, since they all fire differently.

Segment 1: Ramp 500°F/hr to 1000°F and hold 20 min.  
Segment 2: Ramp 850°F/hr to 1360°F and hold 20 min.  
Segment 3: Ramp 9999 (AFAP\*) to 960°F and hold 60 min.  
Segment 4: Ramp 500°F/hr to 300°F and OFF.

\*as fast as possible

For a double glass layer you can fuse and emboss in the same firing. Fire to a 1460°F full fuse and hold for 20 minutes. The firing schedule used was as follows.

Segment 1: Ramp 400°F/hr to 1000°F and hold 20 min.  
Segment 2: Ramp 150°F/hr to 1175°F and hold 10 min.  
Segment 3: Ramp 850°F/hr to 1460°F and hold 20 min.  
Segment 4: Ramp 9999 (AFAP\*) to 960°F and hold 60 min.  
Segment 5: Ramp 400°F/hr to 300°F and OFF.  
\*as fast as possible

COE 96 glass was used for the project shown here. For COE 90 glass, use the same schedule, but in Segment 3 take the temperature up to 1480°F. For clear float glass or clear textured architectural glass, use the same schedule, but in Segment 3, take the temperature up to 1500°F.

## Slump & Fuse, Extra Decorations, and More Texture

If you use a fairly shallow mold, you can do the slump & fuse/emboss in a single firing. Use the same schedule as for a single or double layer.

For extra detail, you can add small strips of ceramic fiber paper, chopped up bits of fiber paper, or a thick kiln wash paste. A cake decorator works well to apply kiln wash paste. Any material that will tolerate the firing temperature and won't stick to the glass can be used to create texture.

**GPQ**

*Dennis Brady has been a full-time professional glass artisan since 1980 and currently works with stained glass, fusing, casting, glassblowing, and sandblasting. He has authored and published six books of stained glass patterns plus A Lazy Man's Guide to Stained Glass. Along with his sons, Dane and Jason Brady, he operates several companies.*

*DeBrady Glassworks produces glass art; Victorian Art Glass sells tools, equipment, and supplies; and Master Artisan Products manufactures molds and tools for glass artisans. He has also created the website Glass Campus, which offers over 100 tutorials and videos teaching numerous glass art techniques as well as tips on how to make a living as a glass artisan.*

*Dennis teaches extensively in his home studio in Victoria, British Columbia, Canada, and as a guest instructor in several other countries. He is also a contributing artist to GPQ's live and recorded Glass Expert Webinars™ and Master Glass Artisan Lecture Series™. His "push the boundaries" approach to experimentation and innovation is always, "How fast can I go until I skid into the ditch?" Visit [www.debrady.com](http://www.debrady.com) to learn more about Dennis and his art.*



# Getting It All Together

## Tips for Making an Adjustable Tool Organizer

*Design, Demonstration, and Text by Susan McGarry*

If you're like me, I have more tools than I know what to do with. I found it difficult to find my tools when I needed them, so I designed this handy little organizer. It works well for my tools, but feel free to make adjustments to fit your own particular needs.

When your tool needs change, this tool organizer is easily adjustable. You will have a place for every tool, and every tool will be in its place. Now that you know where every tool is, you'll have more time to create glass pieces.

### Tools and Materials

Wooden Box, 14" x 10-3/4" x 4"

White Corrugated Plastic Sheet,

13-1/2" x 10-14" and 20" x 30"

White Acrylic Craft Paint Rubber Gloves

White Duck Tape® Decorative Duck Tape®

Foam Paint Brush Scissors or Razor Knife



1

*Gather the supplies you will need to make your tool organizer.*



You should be able to find everything you need at your local craft store.

2

*Use the foam brush to paint the inside and outside of the wooden box with white acrylic paint.*



To save your manicure, wear rubber gloves while you paint. Wait for the paint to dry before continuing, which shouldn't take more than an hour. You can skip this step, but it will be easier to clean later.

3

*Cut the pieces of corrugated plastic sheet to fit the bottom and sides of the box.*



Use the scissors or razor knife to cut the corrugated plastic sheet 13-1/2" x 10-1/4".

Next cut 2 pieces to fit the inside of the box on the longer side that are approximately 13-1/2" x 3-3/4". Cut 2 evenly spaced slits in each piece. These slits need to be the thickness of the plastic sheet, which is approximately 1/4", and only cut halfway down, which would be approximately 2".

4

*Cut the pieces for the shorter sides of the box, then cut slits in the pieces.*





Cut 4 identical pieces of the plastic sheet approximately 10-1/2" x 3-3/4" that fit the inside of the box on the shorter sides. Next cut 8 evenly spaced slits that are approximately 1/4" wide and are only cut halfway down, approximately 2".

*Trim a small indentation from each end of the pieces so they will fit snugly into the slits that are already inside the box.*

5



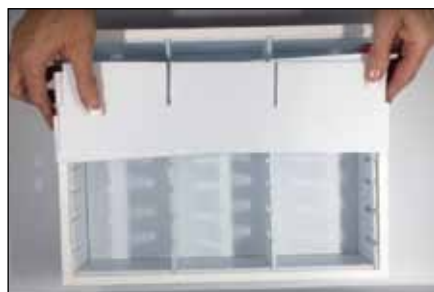
*Place the 4 pieces in the box with the slits facing up.*

6



*Cut the cross pieces that will be added at 90-degree angles to the already installed pieces, then cut the slits.*

7



Cut 8 pieces that are exactly the same size, approximately 13-1/2" x 3-3/4". Cut 2 evenly spaced slits in each piece. These slits should be the thickness of the corrugated plastic, which is approximately 1/4", and only cut halfway down, approximately 2". These slits should line up with the slits in the pieces that were cut in step 4.

Use the white Duck Tape to cover the top edge of each piece. The tape isn't necessary, but the pieces will have a more finished look when covered.

8

*Slide each of the 8 pieces into the slits of the 2 pieces that were installed in step 4.*



This will create 27 little compartments for your tools. These compartments can be easily modified to create smaller compartments, if desired, by cutting more pieces with slits. As an optional step, the outside of the box can be easily decorated by adding decorative Duck Tape.

**GPQ**

© Copyright 2019 by Glass Patterns Quarterly™. All rights reserved.

## Brand New Webinars and Lectures from Glass Expert Webinars™

The Recording is Yours to Keep  
Even if you Miss the LIVE Event!

### Learn How to Create Exciting Kiln Sculptures with Lisa Vogt

• For beginner and advanced students alike.

• Step-by-step construction of more than 5 different sculptural projects in this webinar.

• Learn to create striking sculptural fused glass forms.

• Discover pro tips and tricks for better glass cutting and mixing different fusible materials for more elaborate designs.

• Use standard slumping molds in unique ways to drastically improve the shape of your art.

• See how easy it is to load, program, and fire a kiln when fusing glass.



## Selling on Etsy - Is it for You? by Brittney Ouderkirk

It's time you made money on your handmade products.

Brittney will show you how to:

• Create an account, set up your shop, and list your products.

• Take great product photos and set up discounts and coupons.

• Determine if your work is right for Etsy.

• Discover the importance of your product's name.

• Set up your listings.

• Market your product and help it stand out.

• Recognize the common pitfalls.



[www.GlassPatterns.com](http://www.GlassPatterns.com)

## ARIZONA

**Tumbleweed Stained Glass**  
2628 W Baseline Rd  
Mesa, AZ 85202  
888-261-7091  
www.TumbleweedStainedGlass.com

**Kachina Stained Glass**  
1762 S Greenfield Rd #101  
Mesa, AZ 85206  
480-655-2000  
www.kachinastainedglass.com

**Milkweed Arts**  
1859 W Mullberry Dr  
Phoenix, AZ 85015  
www.milkweedartsaz.com

## COLORADO

**Carol's Creative Glass LLC**  
372 Main St  
Colorado Springs, CO 80911  
719-233-7334

**The Dragons Cache**  
1109 7th St  
Greeley, CO 80631  
970-353-1051

## CONNECTICUT

**The Stained Glass Apple**  
496 Glen Brook Rd  
Stamford, CT 06906  
203-358-8700

## FLORIDA

**Glassic Arts Stained Glass**  
320 S Spring Garden Ave Ste E  
Deland, FL 32720  
386-738-1008  
www.glassicarts.net

**Art Glass Design Studio**  
1329 S 14th St  
Leesburg, FL 34748  
352-365-6699

**D & L Stained Glass Inc**  
2625 N Harbor City Blvd (US 1)  
Melbourne, FL 32935  
321-242-6017  
www.DLSGLASS.com

**Glass Crafters**  
398 Interstate Ct  
Sarasota, FL 34240-8765  
941-379-8333  
www.glasscrafters.com

**Stained Glass For Less**  
2755 Vista Parkway Ste 1-9  
West Palm Beach, FL 32935  
561-557-7713 / 844-SGF-LESS  
www.stainedglassforless.com

## ILLINOIS

**Suevel Studios**  
870 S Arthur Ave  
Arlington Heights, IL 60005  
224-735-2376  
www.suevelstudios.com

**Art Glass Studio of Belleville**  
1600 East A St  
Belleville, IL 62221  
618-235-9638

**Ed Hoy's International**  
27625 Diehl Rd  
Warrenville, IL 60555  
800-468-4527  
www.edhoy.com

## INDIANA

**The Cracked Glass Studio**  
211 Matteson St  
Dyer, IN 46322  
219-864-0459

**The OP Shop**  
**Kokomo Opalescent Glass Co**  
1310 S Market St  
Kokomo, IN 46902  
765-457-1829  
www.kog.com

## KANSAS

**Rayer's Bearden**  
**Stained Glass Supply**  
6205 W Kellogg Dr  
Wichita, KS 67209  
800-228-4101  
www.rayersinc.com

## MAINE

**Treehouse Glass Studio**  
12 Murch Rd  
Sebago, ME 04029  
207-787-3626  
www.treehouseglasstudio.com

## MARYLAND

**Timeless Tiffany**  
1769 W Pulaski Hwy  
Elkton, MD 21921  
410-287-3900  
www.timelesstiffany.com

**Anything in Stained Glass**  
5104 Pegasus Ct Ste F  
Frederick, MD 21704-8323  
800-462-1209  
www.anythinginstainedglass.com

## MASSACHUSETTS

**The Stained Glass Emporium**  
69 Fall River Ave Rt 6  
Rehoboth, MA 02769  
508-336-5455  
karensge@comcast.net  
www.stainedglassemposium.net

## MICHIGAN

**Straits Area Glass Co**  
10994 N Straits Hwy  
Cheboygan, MI 49721  
231-627-4426

**Delphi Creativity Center**  
3380 E Jolly Rd  
Lansing, MI 48910  
800-248-2048  
www.delphiglass.com  
*Free color catalog*  
*150+ classes - see schedule online*

**Lansing Art Glass**  
2320 E Michigan Ave  
Lansing, MI 48912  
517-484-8875

**Stallings Stained Glass**  
5288 Morrish Rd  
Swartz Creek, MI 48473  
810-630-9103  
www.stallingsglass.com

**Linden Art Glass**  
37655 Ford Road  
Westland, MI 48185  
734-728-7767

## MINNESOTA

**Flamingo Glass**  
205 W Lincoln Ave  
Fergus Falls, MN 56537  
www.flamingoglass.com

**Glass Endeavors**  
2716 E 31st St  
Minneapolis, MN 55406  
612-721-9553  
www.glassendeavors.com

**Michael's Stained Glass Studio**  
720 Osseo Ave S  
St Cloud, MN 56301  
800-250-2330 (MN only)  
www.michaelsstainedglass.com

**Sleepy Eye Stained Glass**  
135 Main St E  
Sleepy Eye, MN 56085  
507-794-6449  
www.sestainedglass.com



## MISSISSIPPI

**Seraphim Studios LLC**  
104 S 10th Ave  
Hattiesburg, MS 39401  
601-550-4137  
www.seraphimglass.com

## MISSOURI

**Creative Art Glass Station**  
1900 S Broadway  
Oak Grove, MO 64075  
816-525-8088  
www.stainedglassteacher.com  
*Classes, Extensive selection of glass, supplies, and fusing*

**Art Glass Depot**  
124 S 2nd St  
Odessa, MO 64076  
816-810-3061  
www.artglassdepot.com  
*Classes, supplies and glass for fusing, stained, and mosaics*

## NEVADA

**Glass Art Studio Inc**  
4310 Cameron St #3  
Las Vegas, NV 89103  
702-227-9794  
www.glassartinclv.com

## NORTH CAROLINA

**The Glass Angel**  
224 E Front St  
Burlington, NC 27215  
336-227-1231  
*Full line of supplies and classes*  
www.theglassangel.com

**Mystical Reflections Stained Glass**  
9974 Traders Lane  
Calabash, NC 28467  
910-575-3503  
www.firedup4glass.com

## OHIO

**Hilltop Glass Creations**  
7612 Hamilton Ave  
Cincinnati, OH 45231  
513-931-3688  
www.hilltopglasscreations.com

**Leaded Glass Design**  
1755 State Rd  
Cuyahoga Falls, OH 44223  
330-929-4514  
www.leadglassdesign.com

## TENNESSEE

**Fountain City Stained Glass LLC**  
1328 Buchanan Ave  
Knoxville, TN 37917  
865-688-3333  
Email: fountaincitystainedglass@comcast.net

## TEXAS

**Blue Moon Glassworks**  
108 W 43rd St  
Austin, TX 78751  
512-380-0770  
www.austinbluemoon.com

**Stained Glass Crafters Workbench**  
7515 Eckhart Rd  
San Antonio, TX 78240  
210-647-7475  
www.sgcworkbench.com

## VIRGINIA

**Laurel Gallery**  
2805 Hungary Rd  
Richmond, VA 23228  
804-672-6804  
www.laurelgalleryrva.com

## WASHINGTON

**Glass Expressions**  
648 SW 152nd  
Burien, WA 98166  
206-242-2860

## WISCONSIN

**The Glass Garden LLC**  
25 W Milwaukee St  
Janesville, WI 53548  
608-754-3718  
www.eglassgarden.com

**The Vinery**  
1422 MacArthur Rd  
Madison, WI 53714  
608-271-2490  
www.vineryglass.com

**Hearts Desire Stained Glass and Beads**  
234 A Marina Ct  
Waterford, WI 53185  
262-763-6733  
www.heartsdesirestainedglass.com

## CANADA

*Alphabetically arranged by province, city, then store name*

**Glass Expressions**  
2925 Comox Road  
Courtenay, BC Canada V9N 3P7  
250-339-7739

**Huron Art Glass**  
680 Bay View Dr Unit 3  
Barrie, ON Canada L4N 9A6  
705-721-1323  
www.huronartglass.com

**Artistry in Glass**  
5-1615 North Routledge Park  
London, ON Canada N6H 5L6  
519-641-0443 / 877-386-1116  
www.artistryinglass.on.ca

**Downey Stained Glass & Gifts**  
739 Hwy 105  
Maugerville, NB Canada E3A 8L1  
506-357-3338

**Glasscraft**  
159 Broadway  
Orangeville, ON Canada L9W 1K2  
519-941-2505  
www.glasscraftcanada.ca

**Canadian Stained Glass Warehouse**  
1017 3rd Ave  
Quebec City, QC Canada G1L 2X3  
418-648-0969  
www.canadianstainedglasswarehouse.com



### Advertise Your Shop In GPQ's Stained and Glass Art Supply Shops Directory

Our retail directory is an affordable means of advertising your storefront to potential new customers. You can advertise your store hours, special events, new classes, and website.

Join others who have gifted their favorite instructor and storefront by purchasing a directory listing. In doing so, you can help secure their business success. Contact us to find out how your store can be included.

**Call 1-502-222-5631.**

# GLASS CRAFT & BEAD EXPO

## APRIL 1 - 5, 2020

**SOUTHPOINT HOTEL & CASINO  
LAS VEGAS, NEVADA**

### CLASSES

APRIL 1-5

### EXHIBITS

APRIL 3-5



**APRIL 2 - 5**

**REGISTER ONLINE FOR THE SHOW GUIDE  
WWW.GLASSCRAFTEXPO.COM**

## Advertisers' Index

Advertiser	Contact Info	Page
Aanraku (650) 372-0527	www.ABASG.com	9
Angel Companions (360) 385-3457	www.AngelGlassArt.com	55
Anything in Stained Glass (800) 462-1209	www.AnythinginStainedGlass.com	11
ArtiFill	www.ArtiFill.com	14
Best Stained Glass Patterns	www.BestGlassPatterns.com	15
Brooklyn Hardware, LLC (888) 232-1151	www.PanelClip.com	15
Covington Engineering Corp. (877) 793-6636	www.Covington-Engineering.com	63
Cress Manufacturing (800) 423-4584	www.CressKilns.com	79
D & L Art Glass Supply (800) 525-0940	www.DLArtGlass.com	58
Delphi Glass (800) 248-2048	www.DelphiGlass.com	17
Edco Supply Corporation (866) 397-4777	EdcoFloridaWest@aol.com	71
Evenheat Kiln, Inc. (989) 856-2281	www.EvenHeat-Kiln.com	31
Flight Into Fantasy	Ask Your Local Supplier	31
Franklin Art Glass (614) 221-2972	www.FranklinArtGlass.com	15
Gemini Saw Company, Inc. (310) 891-0288	www.GeminiSaw.com	21
Glass Accessories International	www.GlassAccessories.com	59
Glass Art™ (502) 222-5631	www.GlassArtMagazine.com	21
Glass Art Society (206) 382-1305	www.GlassArt.org	62
Glass Craft & Bead Expo (800) 217-4527	www.GlassCraftExpo.com	78
Glass Expert Webinars™ (502) 222-5631	www.GlassPatterns.com	17/27/75
Glass Patterns Quarterly™ (502) 222-5631	www.GlassPatterns.com	63
Glassy Cuts (360) 613-5472	www.GlassyCuts.com	61
Glastar (800) 423-5635	www.Glastar.com	8
Gryphon Corporation (818) 890-7770	www.GryphonCorp.com	11
Hakko USA (661) 294-0090	www.HakkoStainedGlass.com	5
Handy Hanger (979) 864-0556	www.HandyHanger.net	31
His Glassworks, Inc. (828) 254-2559	www.HisGlassworks.com	71
Hoevel	www.Hoevel.com	67
ISGB (614) 222-2243	www.ISGB.org	62
Jean Beaulieu (819) 383-1681	www.JeanBeaulieu.com	71
Kennedy Original Stained Glass	www.KennedyOriginalStainedGlass.com	59
KWC, LLC Table Foiler (800) 250-1790	www.TableFoiler.com	8
Lisa Vogt	www.LisaVogt.net	71
Master Artisan (250) 382-9554	www.MasterArtisanProducts.com	53
Morton Glass Works (309) 266-5712	www.MortonGlass.com	21
Olympic Kilns (800) 241-4400	www.GreatKilns.com	59
Paned Expressions Studios (410) 676-1248	www.PanedExpressions.com	31/59
Paul Wissmach Glass Co., Inc. (304) 337-2253	www.WissmachGlass.com	80
SGAA (800) 438-9581	www.StainedGlass.org	27
SilkeMat™ (336) 580-7063	www.SilkeMat.com	55
Skutt Kilns (503) 774-6000	www.Skutt.com	2
Unique Glass Colors (407) 261-0900	www.UniqueGlassColors.com	61
Whittemore-Durgin (800) 262-1790	www.WhittemoreDurgin.com	31





**CALL OR EMAIL FOR MORE  
INFO!**

Cress Mfg. Co., Inc.  
4736 Convair Drive  
Carson City, NV 89706  
P: 775-884-2777  
F: 755-884-2991  
E: [Info@cressmfg.com](mailto:Info@cressmfg.com)

## **INTRODUCING**

### **THE GLS17**

### **CLAMSHELL KILN**

The GLS has an interior dimension of 17 x 17 x 13.5 inches and a max temp of 1800 degrees Fahrenheit. The kiln includes a 15-inch square ceramic shelf and 4.5-inch posts. This kiln comes standard with the user-friendly Cress Digital Controller. Cress believes in long-lasting, dependable, and easy to use units. For that reason, the GLS17 comes standard with a built-in moveable stand and spring assisted lid plus elements mounted on the top side in quartz tubes for a greater number of firings!



- Quartz tubed elements mounted on an upper high-temp fiberboard!



- Easy to move lockable wheels for ease of positioning!



A detailed stained glass artwork featuring a dense arrangement of flowers and leaves. The flowers are primarily in shades of orange, yellow, and red, with green leaves interspersed. The design is set against a background of white and black geometric patterns, creating a complex and artistic composition.

# Wissmach

Since 1904,  
manufacturer of  
the largest variety  
of opalescent and  
cathedral glass.

Each sheet  
of Wissmach glass  
is a work of art  
in itself, making  
your work of art  
easier right from  
the start.



**THE PAUL WISSMACH  
GLASS COMPANY**

P.O. Box 228,  
Paden City, WV 26159-0228  
Tel: (304)337-2253  
Fax: (304)337-8800  
[www.wissmachglass.com](http://www.wissmachglass.com)  
[wissmach@frontier.com](mailto:wissmach@frontier.com)