

GLASS PATTERNS[®]

— • Q U A R T E R L Y • —

Summer 2022

Volume 38 • No. 2



**Garden,
Beach, and
Nostalgia
Issue**



Volume 38 No. 2

\$7.00 U.S. \$8.00 Canada



www.GlassPatterns.com

**Don't Miss
Our 16-Page
Pattern Sheet**

KilnMaster

Touchscreen

Programming just got really cool!

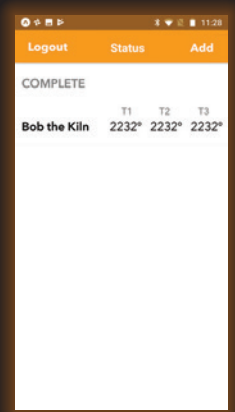


SKUTT



- Built-in Wifi and Free App
- Remote Monitoring
- Navigates like your Smartphone
- Hinged Controller for Perfect Angle
- Built-in Library of Programs

- Write and Name Your Own Programs
- Help Screens for Every Feature
- Graphing
- Logging
- Improved Diagnostics



...and so much more

skutt.com/kmt

Table of Contents

Summer 2022

Volume 38 Number 2

6 3-D Summer Suncatcher
An Introduction to Stained Glass
Design and Fabrication by Lidia K. Anderson

10 Sea Turtle
Design by Susan Walker Bowen
Fabrication by Cindy Dow Savary

14 Bunnies in the Garden
Design by Justin Behnke
Fabrication by Carrie Deutsch

18 Hippie Dude
Design and Fabrication
by Sabine Maiberger

20 Froggie Suncatcher
Design by Judi Hartman

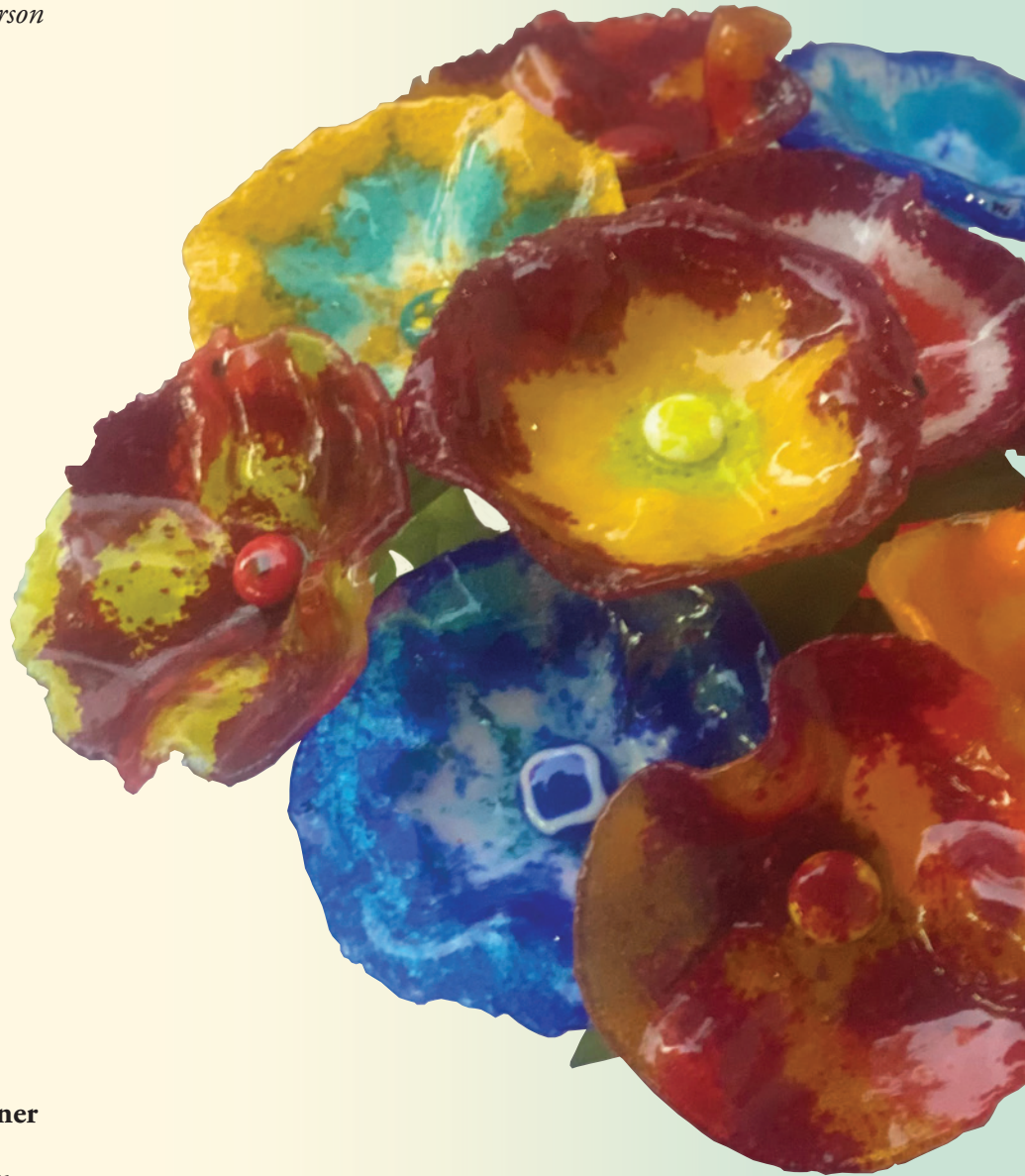
22 Diamond Head Sunrise
Design by Joe Dwight
Fabrication by Cindy Dow Savary

26 Dear Heart
Garden Angel Mosaic Dish
Design and Fabrication by Pat Chase

30 GPQ 2022 Design Contest Winner
Congratulations to Kathy Darneille
Design and Fabrication by Kathy Darneille

32 Iris
Design by Evamarie Volkmann

33–48 16-Page Pullout Pattern Section



Above: Fused Glass Flowers by Mary Gerlick

On the cover: Dragonfly Garden Stake by Lianna Bodzin,
Soul Surfing Mandala by Leslie Gibbs, Bunnies in the Garden
by Carrie Deutsch, and Froggie Suncatcher by Judi Hartman.
Soul Surfing Mandala photo by Jon Gibbs.

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

Lianna Bodzin, Susan Walker Bowen

Pat Chase, Kathy Darneille, Carrie Deutsch

Joe Dwight, Mary Gerlick, Leslie Gibbs

Judi Hartman, Arnold Howard, Petra Kaiser

Mark Lauckner, Bob Leatherbarrow

Sabine Maiberger, Paned Expressions Studios

Terra Parma, Cindy Dow Savary

Evamarie Volkmann, 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 www.GlassPatterns.com

Subscriptions: United States, one year

print and digital combo subscription \$28;

one year digital subscription \$28;

Foreign (U.S. Funds): one year print and

digital outside U.S. combo subscription \$40;

one year digital subscription outside U.S. \$28;

one year print and digital airmail

combo subscription \$96.

Single copy price \$7 plus shipping.

All subscriptions must be paid in

U.S. dollars with an international

money order or with a check

drawn on a U.S. bank.

Credit card, debit card,

or PayPal also accepted.

Periodicals Postage Paid

at Westport, KY 40077

and additional mailing offices.

©2022 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.

49 Soul Surfing Mandala Ocean Visions

Design and Fabrication by Leslie Gibbs

54 Summer Oceans, Shells, and Sand Kiln Casting with Sand Molds and Core-Making

Design and Fabrication by Mark Lauckner

57 Calla Lilies

Design by Terra Parma

58 Making Heat Work for You

by Bob Leatherbarrow

62 Flower Power

Creating Fun Flower Blossoms

Design and Fabrication by Petra Kaiser

66 Dragonfly Garden Stakes

Design and Fabrication by Lianna Bodzin

70 Fused Glass Flowers

Design and Fabrication by Mary Gerlick

74 Kiln Corner

**Protecting an Outdoor Kiln
from Weather**

by Arnold Howard

76 Stained and Glass Art Supply Shops

78 Advertiser Index



Above: Wallflowers Wall Art
by Petra Kaiser

Upcoming Submission Deadlines

Winter 2022

Editorial

Ad Closing

Ad Materials

Winter, Wildlife, and Landscapes

August 20, 2022

October 20, 2022

October 30, 2022

Spring 2023

Editorial

Ad Closing

Ad Materials

DIY Home Decor, Lighting, Tiles Tables, and Wall Art

November 20, 2022

January 20, 2023

January 30, 2023

SQUARE STANDS



ROUND STANDS



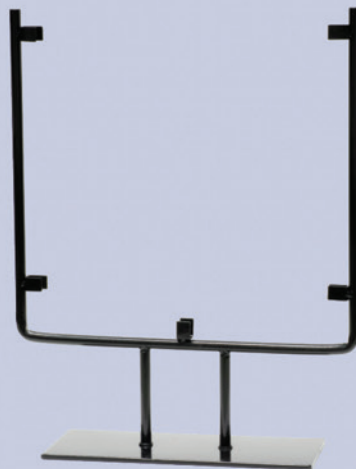
ANGLED STANDS



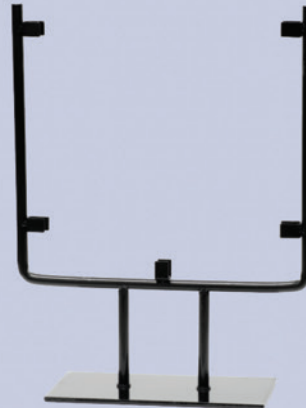
POINT-DOWN STAND



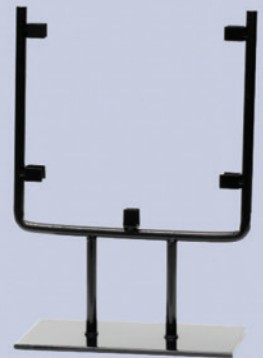
AAN-DSPDS
Point-Down Stand



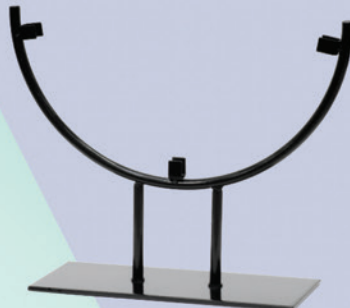
AAN-DSSS12
12-inch Square Stand



AAN-DSSS10
10-inch Square Stand



AAN-DSSS08
8-inch Square Stand



AAN-DSRS12
12-inch Round Stand



AAN-DSRS10
10-inch Round Stand



AAN-DSRS08
8-inch Round Stand



AAN-DSAS08
8-inch Angled Stand



AAN-DSAS06
6-inch Angled Stand



AAN-DSAS04
4-inch Angled Stand


**Portable Display Stands to easily display
your artwork anywhere you choose.**



GARDEN STAND
AAN-DSGS08 8-inch, 10-inch, 12-inch, Garden Stand

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.aanraku.com

"Aanraku", its logomark and  are registered trademarks of Aanraku Glass Studios. All rights reserved.



3-D Summer Suncatcher

An Introduction to Stained Glass

Design, Fabrication, and Text by Lidia K. Anderson



Summertime is my favorite season of all. It's a time to be able to enjoy the outdoors and soak up some sun. Capture the summer in this 6" 3-D suncatcher and enjoy it all year round in a bright space in your home, office, or patio.

Glass

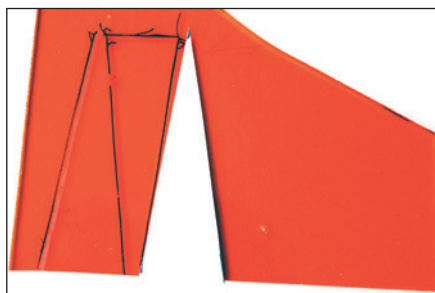
6" Squares in Desired Colors, Scrap
20 mm Crystal Ball Bead with Attaching Ring

Tools and Materials

Permanent Marker Flux
Flux Brush
1/4" Copper-Backed or Black-Backed Foil
Copper or Black Patina Foil Burnisher or Fid
60/40 Solder Temperature-Controlled Soldering Iron
Locking or Needle Nose Pliers Safety Glasses
2" Steel Ring 2 Jump Rings
Ribbon, Chain, or Fishing Line Polishing Compound

1

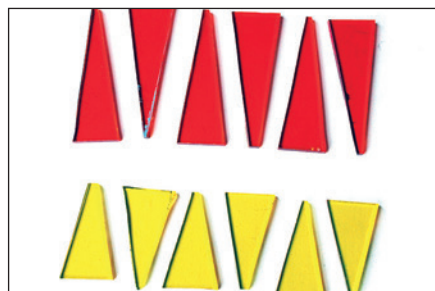
Trace the pattern pieces onto the glass with a permanent marker.



Make sure that the base for each color is exactly 7/8" or a little less.

2

Cut out all of the glass pieces and grind the edges smooth.



I like to do a final grind with a mirror grinding bit so the edges are rounded. ****Be sure to wear safety glasses while you are grinding the glass.**** When you are finished grinding, wash and dry all of the glass pieces.

3

Apply the 1/4" copper foil to the glass edges.



You can choose copper-backed foil if you are going to use a copper patina for your final piece or black-backed foil for a black patina finish.

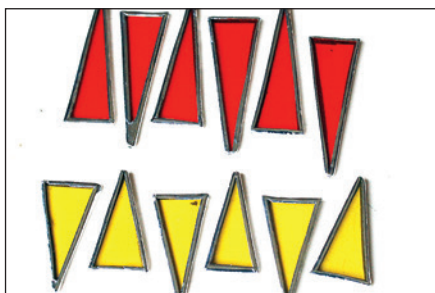
4

Burnish all of the large and small points.



5

Flux and solder all of the points on the fronts, backs, and edges.



6

Flux the steel ring, then cover it with a generous amount of solder.



Set the soldering iron to the hottest temperature and apply solder to the entire metal ring. Make sure you use a pair of locking or needle nose pliers to hold the metal ring while you are soldering, since it will get extremely hot. ****Do not use an aluminum ring, since it will not solder.**** You can find steel rings at hobby stores.

7

Begin to solder one small point to the ring at a slight angle upwards.



Setting the points at an angle will create the 3-D effect for the finished piece.

8

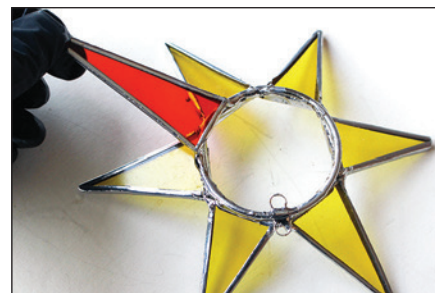
Solder the remaining 5 small points all around the ring and add the jump rings to the steel ring.



When all 5 points have been soldered onto the ring, use a pair of pliers to hold onto a jump ring and solder it in place on the outside of the steel ring between 2 of the points. Repeat with the second jump ring on the inside of the steel ring, opposite the first ring.

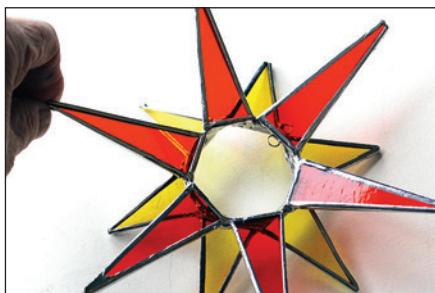
9

Turn the piece over and solder one large point in place at an angle in between 2 of the small points.



Solder the remaining 5 large points onto the back of the ring as shown.

10



The point that is close to the jump rings will wind up in between the inside and outside rings. At this stage, you can reduce the temperature of the soldering iron and bead-solder the edges on the front and back of the final piece.

Wash the suncatcher with warm soapy water, rinse, and dry. Finish by polishing the suncatcher with your favorite polishing compound until it is bright and shiny.

Open up the ring that is attached to the crystal ball bead and slide it through the inside jump ring.

11



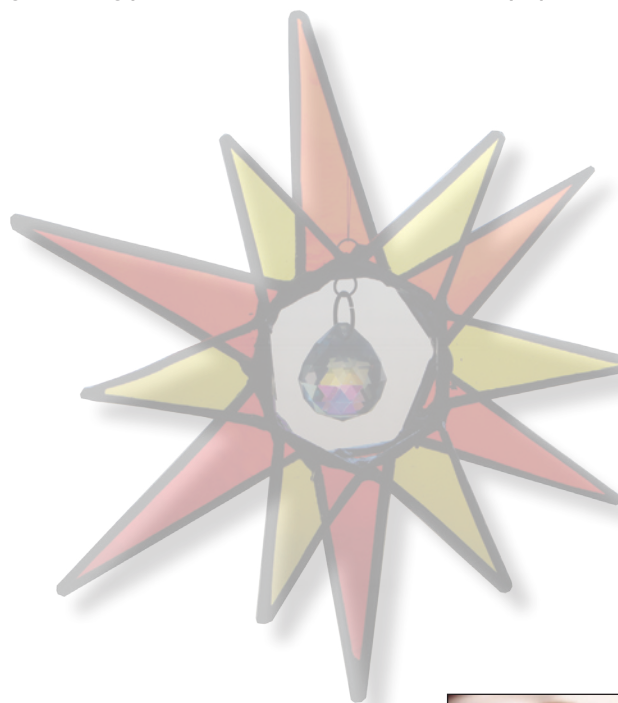
You can use any crystal that fits inside the 2" space.

12

Close the ring tightly before hanging the suncatcher.



You can even solder the joint shut for extra security if you'd like. To finish, string a ribbon, chain, or fishing line through the top ring and hang your new 3-D suncatcher in a sunny spot. **GPO**



HANDY HANGER®

Compliments of Jessica from
Anything in Stained Glass
and Eric Allen from
Ed's Emporium

**New Finley®, Ellie®,
and Mini Ellie®,
Fusible Hangers**
Each sold in
8-Pair Packages

**Perfect for
Fused Glass Art
up to 5 Pounds**

www.HandyHanger.net

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.

© Copyright 2022 by Glass Patterns Quarterly®.
All rights reserved.

the Gryphon Family of Glass Tools

Only Gryphon offers such a versatile line of tools for the glass artist. Three types of diamond saws: band saw, ring saw, and wire saw. Three grinders: small, medium and large with the convertible work surface. A full line of grinding bits, including specialty bits and core drills. A wet belt sander, came cutter, glass cutters and more. See them at your dealer or visit our website.

Our 60th year!



www.gryphoncorp.com
818-890-7770



Miter Saw



Ring Saw



4 Band Saws



Wire Saw



Wet
Belt
Sander



3 Grinders



And More...



Sea Turtle

Design by Susan Walker Bowen, Fabrication and Text by Cindy Dow Savary

Photographs by Cindy Dow Savary and Gerry L. Savary



Youghiogheny Opalescent Glass

1002HS White Opal/Amber High Strike
for Ocean Floor, 1/2 Sq. Ft.

Additional Glass

Dark Green/Lime Green/Clear Streaky
for Seaweed, 3/4 Sq. Ft.

Ruby Red/Lime Green/Blue Opal Wavolite
for Turtle, 1/2 Sq. Ft.

Cobalt Blue/Amber for Border, 1 Sq. Ft.

Key Lime Fusible for Seaweed, 1/2 Sq. Ft.

Deep Steel/Sky Blue Waterglass Fusible
for Ocean, 1-1/2 Sq. Ft.

Glass Cut from Scrap

Amber Glue Chip for Starfish

Pink Glass for Conch Shell Yellow for Angel Fish

Green for Turtle Grape Rough Rolled for Angel Fish

Black Waterglass for Angel Fish

Emerald Green Opal for Turtle

Tools and Materials

Foil Pattern Scissors Toyo Pistol Grip Cutter

Grozing Pliers Running Pliers Grinder

Permanent Markers Morton Layout Block System

Pushpins Rubbing Alcohol

Paper Towels X-Acto® Knife

7/32" Black-Backed Copper Foil

Aanraku® Foil Burnish Roller Lathekin/Plastic Fid

Nokorode® Paste Flux 60/40 Solder

Hakko FX-60I Soldering Iron Safety Glasses

Kwik-Clean® Flux Remover Nitrile Gloves

Jax® Pewter Black Novacan Black Patina

Liva Stained Glass Polish Cotton Rounds/Swabs

Horseshoe Nails Hammer 1" Oak Frame (2)

Aanraku® Stained Glass Bent Hook Hangers

Aanraku® Stained Glass Framing Screws

Cascade 1/2" Zinc U-Came Scotch-Brite™ Hand Pad

2" Cut-Off Saw

There is some confusion about turtles and tortoises. Did you know that all tortoises, which are strictly land creatures, are turtles, but not all turtles are tortoises and that not all land turtles are tortoises. For example, box turtles and wood turtles are not considered tortoises. Now that I have muddied the waters, I would like to focus on sea turtles and their struggle for survival.

There are many threats to the survival of the sea turtle and the destruction of their habitat. Only one out of every hundred eggs will mature into adulthood. Six out of the seven species of sea turtles are considered endangered and/or threatened under the Endangered Species Act. There is no one threat that is greater than another. Plastics, once thought to be a game changer, have now become a worldwide problem.

Plastics cause a variety of problems for sea turtles. Plastics on the beaches can cause newly hatched turtles to become entangled in the plastic and die. Many turtles confuse plastic with their actual diet of jellyfish. When ingested, it can obstruct their intestines and cause internal bleeding that leads to their eventual death. With public awareness, we can help by reducing plastic dependency and increase funding for cleanup. Some think there should also be increased fees and taxes on polluters. Please do your part to help.

Susan Walker Bowen's inspiration for this 18" x 24" design came from a ceramic plate depicting a turtle. Her cousin bought it while working in St. John's and wanted Susan to create a panel to remind her of her time there.



Prepare the patterns.

Make two copies of the pattern, one for cutting and the other to use for layout of the glass. Color and number the pattern and mark for grain direction. Coloring the pattern helps to pick out glass colors. It is also great for separating by glass color.

2

Cut out the pattern using foil scissors and glue to tag board, then recut the pattern pieces using regular scissors.



It is a little extra work, but you will get extra support when grinding.

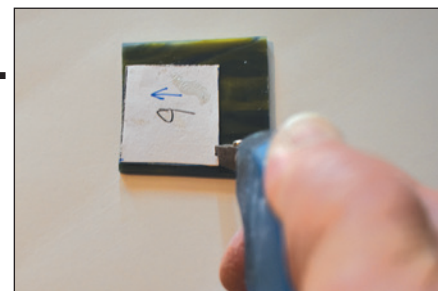
3

Glue the pattern pieces to the glass.



4

Score as close to the pattern piece as possible.



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

5



Use a grinder to smooth out any rough edges.

6



Place the pieces of glass on the layout copy.

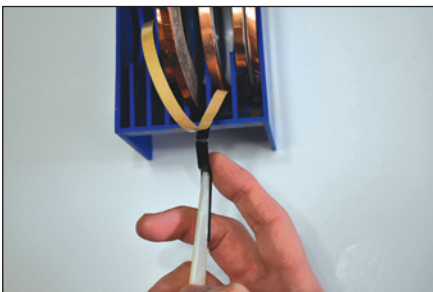
7



I use the Morton Layout Block System to keep the pieces in place.

Clean each piece of glass with rubbing alcohol and dry, then apply the foil to all of the glass pieces.

8



I 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 finger 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. I use a variety of foil widths depending on the thickness of the glass.

9

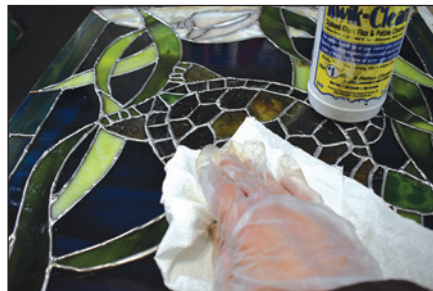


Solder all of the copper foil lines.

Apply flux to the copper foil lines, then tack-solder each joint before running a smooth raised bead of solder on the front and back. Do not solder all the way to the edge, since the zinc frame that will be applied later will not fit.

10

Thoroughly clean the project using Kwik-Clean to remove any residual flux.



11

Apply the Novocan black patina.



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

12

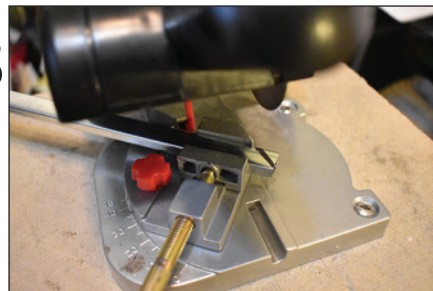
Polish the panel.



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.

13

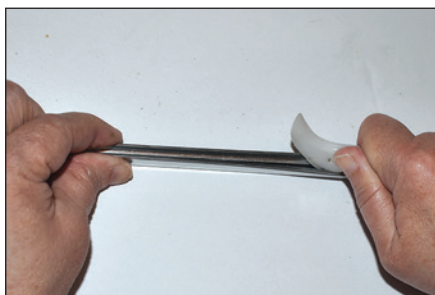
Frame the panel using 1/2" zinc U-came.



Mark the direction of the cut on the zinc before using the 2" cut-off saw.

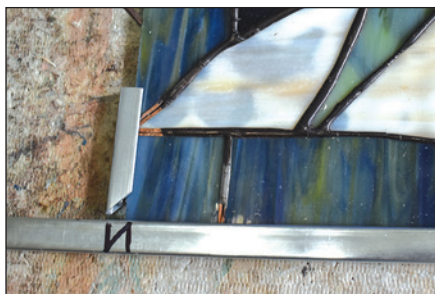
14

Use a plastic fid/lathekin to open the channel on the zinc.



15

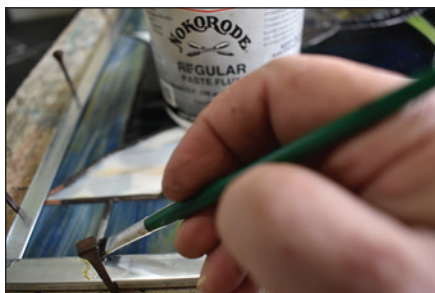
Use horseshoe nails to secure the panel when adding the zinc.



To make framing easier, use a small piece of zinc that has been mitered to show you where to mark and cut.

16

Apply flux where the soldered lines meet the zinc and solder.



17

Scuff up the zinc with a Scotch-Brite pad before adding JAX Pewter Black to the zinc.



I asked my husband to frame the panel in wood. This project is now complete and will make a beautiful addition to your own decor or a great gift for that special someone. **GPO**



Cindy Dow Savary has always had a passion for art and has been a crafter all 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 a piece that would become part of a new Airbnb called Anabella's Studio in Round Rock, Texas. The client, Lisa Loftus-Adams, wanted to honor the memory of her friend Charlie, 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. For more of Cindy's work, visit www.instagram.com/cindy.savary77 or go to www.facebook.com/APassionForGlassByCindySavary.



Susan Walker Bowen grew up in Southeast Texas, where she was invited to a friend's house in 1979. Her friend was working on a stained glass lamp and explained the process. She knew then that someday she wanted to learn how to create something in glass.

Susan has been creating beautiful patterns, glass panels, sun-catchers, and lamps for ten years. For the last five years, she has worked for Inspiration Glass Studio in Georgetown, Texas, learning more about how to replace and repair various glass items. Susan, who loves subjects that are very colorful, finds that inspiration for creating patterns comes from looking at art and researching photos on the Internet. She is currently learning about fused glass.



© Copyright 2022
by Glass Patterns Quarterly®.
All rights reserved.



Bunnies in the Garden

Design by Justin Behnke, Fabrication and Text by Carrie Deutsch

Photography by Carrie and Mike Deutsch



Youghiogheny Opalescent Glass

4554 SP Lime Green Ice/Silver Yellow/Emerald Green Stipple
for Petunia Leaves, Scrap

Y96-360 Violet for Iris Flower and Iris Fields, 3/4 Sq. Ft.

4302SP White/Avocado Green/Black Stipple
for Foreground, 1 Sq. Ft.

Wissmach Glass Co.

WO-708 Light Green/Dark Green/White Opal Wispy
for Iris Leaves, 1/2 Sq. Ft.

Additional Glass

Black for Inner Border, Scrap

Streaky Dalle for Petunia Flowers, 1/2 Sq. Ft.

Brown/Green Opal for Strawberry Leaves, 1/2 Sq. Ft.

Cerise Ruby for Strawberries, Scrap

Dark Amber/Opal for Rabbits, 1/2 Sq. Ft.

Soft Gray/Opal for Rabbits, 1/2 Sq. Ft.

OB Sky for Background, 1 Sq. Ft.

Caramel Opalume/Lime Green/Brown
for Midground, 1/2 Sq. Ft.

Clear Rough Rolled Waterglass

for Border Background, 1/2 Sq. Ft.

White Waterglass for Strawberry Blossoms, Scrap

Green for Iris Stem, Scrap

Yellow for Strawberry Blossom Centers, Scrap

Light Green for Strawberry Stems, Scrap

Tools and Materials

Foil Pattern Sheers Toyo Pistol Grip Cutter

Grozing Pliers Running Pliers Grinder

Pushpins Paper Towel X-Acto® Knife

7/32" and 3/16" Black-Backed Copper Foil

Foil Burnisher/Fid Classic 100 Gel Flux

60/40 Solder Hakko FX-601 Soldering Iron

Kwik-Clean® Flux Remover Nitrile Glove

Novacan Black Patina Plastic Scrubby

Mothers® Carnuba Wax Clarity Polish

Soft Rags

One of the things I love about creating with stained glass is the ability to bring color and movement to a room. Making something that is inanimate seem alive is a huge challenge for me. I tend to pick patterns that are very detailed, which usually means little pieces of glass. As much as I complain about cutting and foiling them, these small pieces really bring the panel to life.

When I pick a pattern, I usually tape it on a wall for a few days. I study the pattern and let my mind focus on the parts of the pattern that move—the plants, the animals, and the sky, for example. Once these images take shape in my mind, I can choose glass that will help me bring that vision to life.

I saw this 16" x 26" pattern with flowers and bunnies and fell in love with it. My brothers and I had bunnies when we were kids. We also had a little strawberry patch. Making this panel brought me back to those days, reacquainting me with these beautiful creatures and the world we share with them.

1

Cut out the
pattern pieces.



You'll need two copies of the pattern, one for cutting out the pieces and one to use as a layout pattern. All artists have their own way of cutting the pattern pieces apart. I use pattern shears to avoid the pattern growing after the pieces have been foiled.

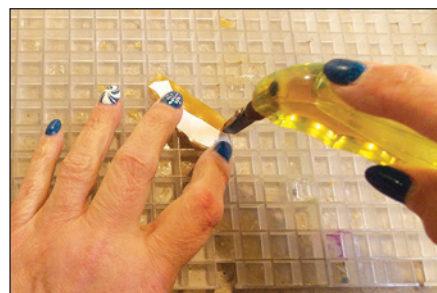
2

Adhere the
pattern pieces
to the glass.



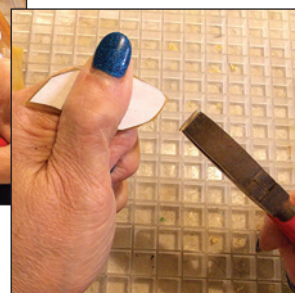
3

Score the
glass as close
to the pattern
paper as
possible.



4

Use breaking or
grozing pliers to
break off any excess
glass.



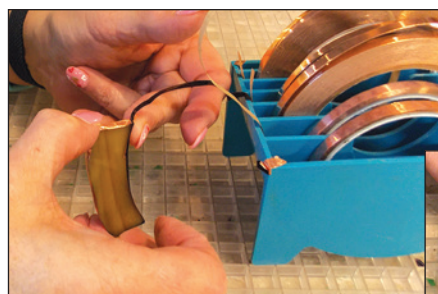
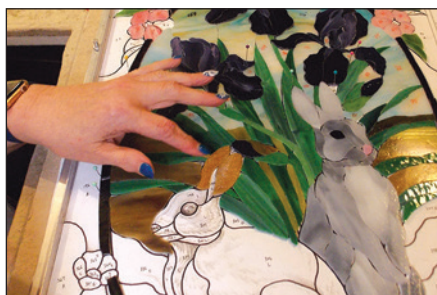
5

Grind each
glass piece to
ensure a
good fit.



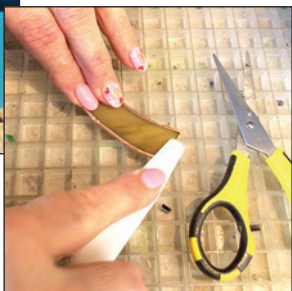
Place the cut glass pieces on the pattern to make sure they fit nicely.

6



7

Foil the glass pieces and use a fid or burnishing tool to make sure the foil adheres well to the glass.



Make sure that all of the glass pieces are clean before applying the foil. I use a variety of sizes— $7/32"$, $3/16"$, and $5/32"$ —depending on the thickness of the glass.

8

Check the foiled pieces for any areas where the foil doesn't meet.



It is important to do a good once over before you start soldering to make sure there are no areas on the foil called tags that do not meet perfectly. If you see any, this would be the time to use an X-Acto knife to trim them off.

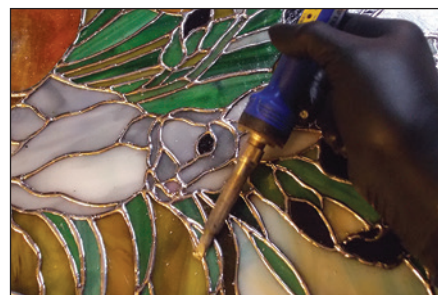
9

Arrange the foiled glass pieces on the layout pattern.



10

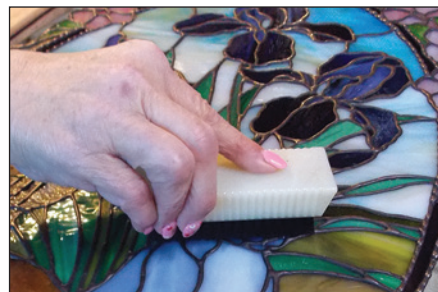
Apply flux to the glass pieces, tack-solder them together, and finish-solder with a rounded bead.



The flux helps the solder flow smoothly and bond to the copper foil. I use Classic Gel Flux. Next I tack-solder at the joints, then run a nice, rounded bead on the foil lines. Once I am done soldering the first side, I clean off all of the flux residue using Kwik-Clean Flux Remover, flip the piece, and solder the backside.

11

Clean the panel again to remove any flux residue before applying black patina to the solder lines.



I used Novacan Black Patina on this piece.

12

Apply wax to the panel and buff to a shine.



On my pieces, I use Mother's Carnuba Wax. Once the panel is dry, I use a soft rag made from cut up T-shirts to apply the wax to the panel. I do not wait for the wax to dry before I use another soft rag to buff it up. Continue to buff until you do not see any more black coming off on the rag. You can use a fingernail brush to remove any dried wax from tiny crevices.

13



Frame the panel to finish.



This panel was finished with a light oak frame. I purchased the oak pieces that were already routed out for the glass panel. When purchasing the wood sticks, you can specify whether it is a foiled piece or a came piece, which determines the size of the routed opening. Your glass panel should fit nicely with no wiggle room.

GPQ



DELPHI

STAINED GLASS FUSING MOSAICS JEWELRY FLAMEWORKING

Whale, HELLO THERE



Artist: Kelli Graves. From Delphi's Online Artist Gallery.

ALL YOU NEED IS GLASS AND SOME VITAMIN SEA



Artist: Yulia Hanansen. From Delphi's Online Artist Gallery.



© Copyright 2022 by Glass Patterns Quarterly®.
All rights reserved.



**Shell-abrating Glass Art
Since 1972**

Request a FREE Catalog today!
DelphiGlass.com/Catalog
800-248-2048



Hippie Dude

Design, Fabrication, and Text by Sabine Maiberger



My inspiration for this 9-1/4" x 12" Hippie Dude was actually a cookie cutter. Like most glass artists, I always envision any object as a glass piece, and this is what I saw when looking at the cookie cutter—color! Color is always a huge factor when working in glass. I'm a kid from the 1970s, so anything with lots of color, peace signs, and just groovy things brighten my day.

I always have this little Hippie Dude hanging in my shop, since he brings a smile to my face on a daily basis. I think everyone should have a little Hippie Dude hanging around to brighten their day too! As you are gathering the scrap glass you will need to make this little guy, be sure to pick assorted bright colors that make you smile.

Glass

Assorted Bright Colors, Scrap

Tools and Materials

Pushpins 60/40 Solder

Flux Silver-Backed Copper Foil

Glass Cutter Foil Shears

Grozer Pliers Foil Burnisher/Fid

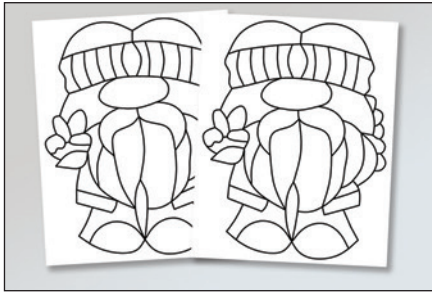
Grinder Soldering Iron Jump Rings

CJ's Flux Remover Clarity Polish

Soft Rags Hanging Ribbon or Chain

1

Print 2 copies
of the pattern.



One copy of the pattern will be used to assemble the glass pieces. The pieces on the other copy will be cut apart and adhered to the glass. Having the pattern pieces attached to the glass will help as you use your glass cutter to cut out the glass pieces. When all of the glass is scored, use your grozer pliers to break the pieces apart.

2

Grind the
individual
glass pieces
as needed.



Ensure that all of the glass pieces fit together correctly on your printed pattern. If some of them don't fit together very well, use your grinder to shape the glass as required so they fit within the printed pattern. Use pushpins to hold all of the glass pieces in place on the printed pattern.



Clean and foil all of the glass pieces.

3



Once all the glass pieces fit within their place on the printed pattern, wipe and clean each piece. That will ensure that there are no remains of grinder dust and you will have good adhesion of the copper foil to the glass.

Now begin foiling all your glass pieces. Once complete, place them back on the printed pattern again and repin them.



Apply flux to the foil lines and
solder the pieces together.



Flux the copper foil lines before beginning the soldering process. Solder all the glass pieces together, then tin around the outer edge of the piece. Add jump rings at a joint if you wish to hang the finished piece.

5

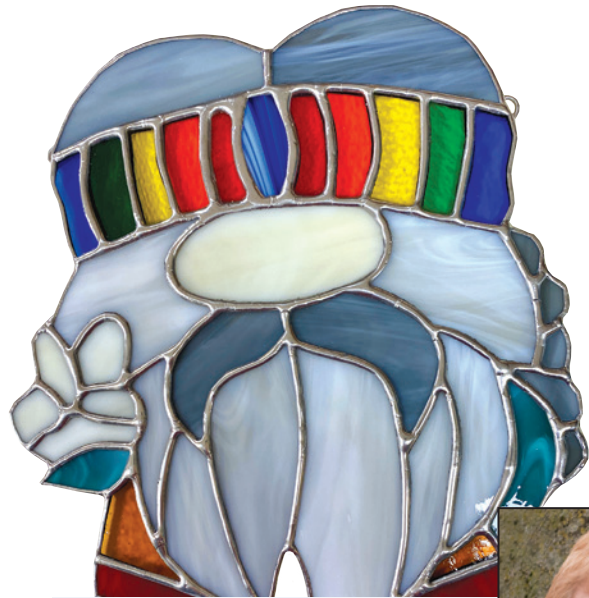
Clean and
polish the
panel.



Once you've completed soldering both sides, clean the piece with CJ's Flux Remover to remove any remnants of the flux from the panel. Next, polish the piece with Clarity Polishing Compound, since this really brings out the shine of the solder. Buff with a clean, soft cloth to remove any extra polish and bring out the shine.

It's time to add some ribbon or chain so you can hang and enjoy this little Hippy Dude. He'll put a smile on your face and bring joy to others each time you see him. Peace Out and have a groovy day!

GPQ



Sabine Maiberger has always loved color, art, and creating. Her favorite colors are All of Them! She had been working in ceramics and hand painted glass since 1995 when she thought, "How hard can it be to create stained glass from my painted glass pieces?" And so it began, a self-taught stained glass artist who has now expanded her glass empire to fused glass, sandblasted and laser engraved glass, and so much more.

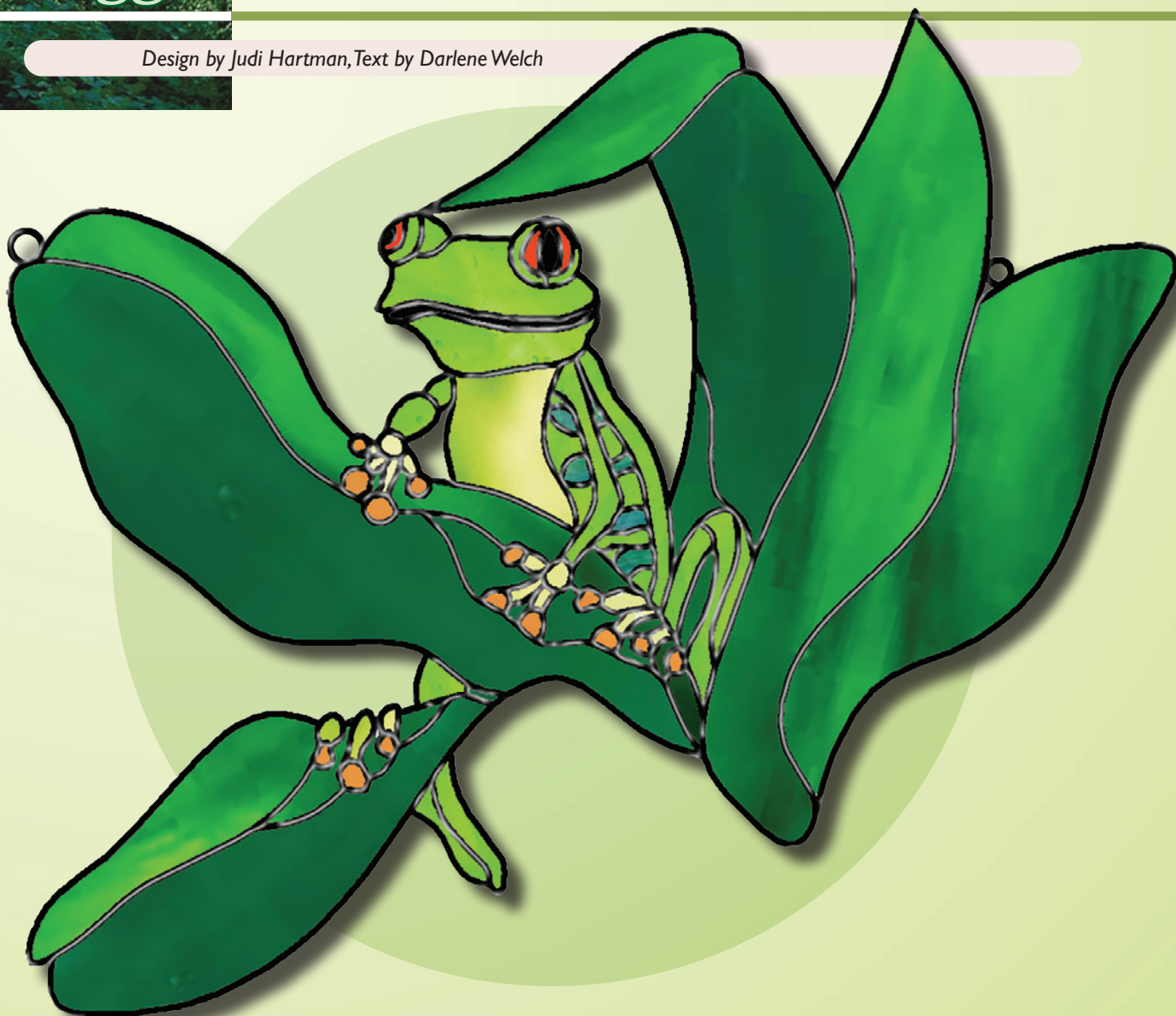
Sabine's brick and mortar shop, PeaceLuvGlass, opened its doors in 2017. There you can find not only glass but supplies, tools, classes, finished pieces, inspiration and, of course, lots of color! It's the grooviest place on earth. To learn more about Sabine's art and shop, please visit www.PeaceLuvGlass.com.

© Copyright 2022 by Glass Patterns Quarterly®.
All rights reserved.



Froggie Suncatcher

Design by Judi Hartman, Text by Darlene Welch



Frogs are some of the most intriguing creatures around and are found all over the world. This happy little guy, who is captured here in all his glory, is part of the *Hartman's Glass Art Oceans and Islands* pattern CD from Paned Expressions Studios. The collection includes this 14" x 12" free-form design, just one of over 60 stained glass patterns featuring island landscapes, animals, and birds, plus ocean fish and tropical flora.

This pattern collection contains image files only with no software included on the CD. Patterns are provided in color as well as black and white in JPG, TIFF, and Glass Eye formats for both PC and Mac, which makes them easy to resize, reshape, and recolor. The designs also cover all levels of glass expertise, so there is something for everyone. For this and many other wonderful pattern collection CDs from Paned Expressions, visit www.panedexpressions.com.

GPQ

Wissmach Glass Co.

- 708-LL Light Green/Dark Green Mystic Streaky for Green Leaves, 1 Sq. Ft.
- 702-LL Medium Green/Dark Blue/White Opal Mystic Streaky for Green Leaves, 1 Sq. Ft.
- 57-LL Medium Green/Opal/Crystal Streaky for Frog Head, Body, and Legs, Scrap
- WO-197 Dark Blue/Medium/Opal/Crystal Wispy for Frog Stripes, Scrap
- 317-D Dark Amber/Dense Opal for Toe Pads, Scrap
- Black for Mouth and Eyes, Scrap
- 18-LL Light Orange Streaky Double Rolled for Eyes, Scrap

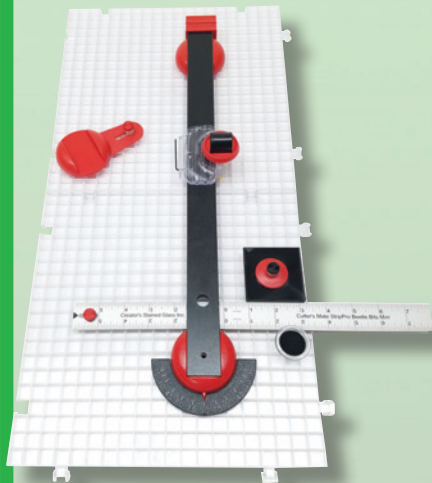
Tools and Materials

7/32" Copper Foil Flux Solder Black Patina

© Copyright 2022 by Glass Patterns Quarterly®. All rights reserved.

CreatorsBrand.com A Place for Doers

Get started on your next
DIY project today!



Creator's
Mini Beetle Bits
Glass Cutting System
Complete with 2-Pack
Waffle Grids and Push
Button Flying Beetle
Glass Cutter **Included**
Run Your Score with the
NEW Flash Break



CREATOR'S®

Made In The U.S.A
847-477-3863

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!



Our website offers:

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

f t YouTube Instagram
FRANKLINARTGLASS.COM



614.221.2972

222 E. SYCAMORE ST. COLUMBUS, OH 43206

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 COMPANY, INC.
310-891-0288
www.geminisaw.com



Diamond Head Sunrise

Design by Joe Dwight, Fabrication and Text by Cindy Dow Savary

Photographs by Cindy Dow Savary and Gerry L. Savary



One of Hawaii's most recognized landmarks is Diamond Head. In the 19th century, British sailors thought the calcite crystals in the sand looked like diamonds. Local Hawaiians call it *Leahi*, derived from two words meaning brow ridge and tuna, because the shape of the ridgeline resembles the shape of a tuna's dorsal fin. Diamond Head, which is a dormant volcanic cone, is estimated to be about 400,000 to 500,000 years old. It was designated as a State Monument in 1962 and a National Natural Landmark in 1968.

Joe Dwight, a local Hawaiian stained glass artist, has depicted Diamond Head from the beaches of Waikiki in this 31" x 23" design.

It's an impressive backdrop to one of Hawaii's most popular beaches. Palm trees line the beach and are depicted from a distance. The blue water breaks waves on the shore. He also has drawn native plants, including the bird of paradise. His beautiful designs come from the things the artist sees, sometimes on his walks with his two dogs, Kiko and Milo.

Joe has been involved in the glass world since 1979. Back then, there were several glass shops. Unfortunately, today they are all gone, and the supplies must be shipped to the island. When you commission a piece, he will tell you that if he can draw it, he can

build it. When collaborating with clients, Joe asks them to give him an idea of what they want, he begins to design, and he never charges for the design work.

Over the years things have changed. When Joe first started building stained glass art, he was charging \$35 per square foot. Today, he charges \$300, because of the increase in materials. Recently he received an order for fourteen windows that will take him two years to complete. At age 76, Joe is still going strong. He once shared, "Whoever said that when you get older you'll have plenty of spare time lied!"

Youghiogheny Opalescent Glass

U-57-912 Butterscotch/Coffee Fipple Texture
for Volcano, 1 Sq. Ft.

Wissmach Glass Co.

300 Medium Sky Blue Classic for Sky, 1/2 Sq. Ft.

319 Flemish Olive Green Cathedral for Plants, 1/2 Sq. Ft.

Additional Glass

Medium Blue Opalume/Royal Blue Tight Ripple
for Ocean, 1/4 Sq. Ft.

Lighter Green Wavolite

for Palm Tree Leaves and Background Trees, 1 Sq. Ft.

Deep Steel/Sky Blue Waterglass Fusible
for Ocean, 1/2 Sq. Ft.

Pearl Fusible for Clouds, 1/2 Sq. Ft.

Clear/Ivory Fusible for Beach Sand, 1 Sq. Ft.

Lime Green/White Fusible for Plants, 1/3 Sq. Ft.

Glass Cut from Scrap

Orange for Sun

Firelight White Opalescent for Ocean

Medium Blue Ripple for Ocean

Medium Violet for Bird of Paradise Plants

Orange for Bird of Paradise Plants

Green for Bird of Paradise Plants

Medium Amber/Opal Granite for Palm Tree Trunk

Medium Amber for Coconuts

Textured Green for Plants

Medium Yellow Green for Plants

Tools and Materials

Foil Pattern Shears Toyo Pistol Grip Cutter

Grozing Pliers Running Pliers Grinder

Permanent Markers Morton Layout Block System

Pushpins Rubbing Alcohol Paper Towels

X-Acto® Knife 7/32" Black-Backed Copper Foil

Aanraku® Foil Burnisher Roller Lathekin/Plastic Fid

Nokorode® Paste Flux 60/40 Solder

Hakko FX-601 Soldering Iron Safety Glasses

Kwik-Clean® Flux Remover Nitrile Gloves

JAX® Pewter Black Novacan Black Patina

Liva Stained Glass Polish Cotton Rounds and Swabs

Horseshoe Nails Hammer Handy Hangers®

Cascade 1/2" U-Channel Zinc Came 2" Cut Off Saw

Scotch-Brite™ Pad

1

Prepare
the patterns.



Make two copies of the pattern, one for cutting apart and the other to use for laying out the glass pieces. Color and number the pattern pieces and mark them for grain direction. Coloring the pattern helps to pick out glass colors, and it is also great for separating the glass pieces by color.

2

Cut out the
pattern pieces
using foil scissors
and glue them to
tagboard.



You will need to then recut the pattern pieces using regular scissors. It's a little extra work, but it will give you extra support when grinding the glass.

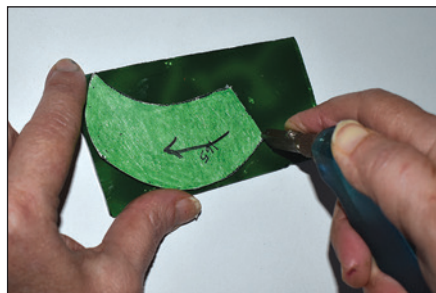
3

Glue the
pattern pieces
to the glass.



4

Score the
glass as close
to the pattern
piece as possible.



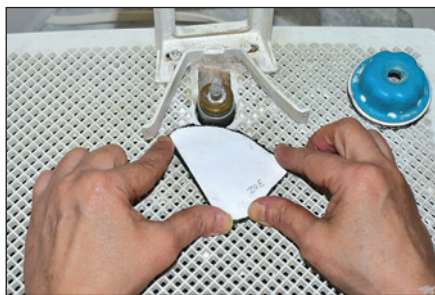
5

Use grozing
and running
pliers to separate
and remove any
excess glass.



Grind the glass pieces to smooth out any rough edges.

6



Place the glass pieces on the layout copy.

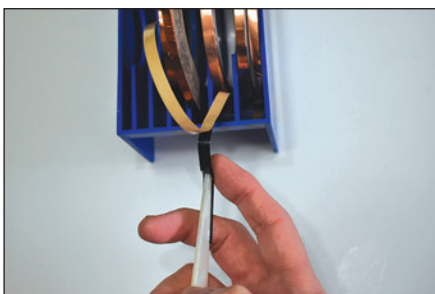
7



I use the Morton Layout system to keep the pieces in place.

Clean each piece of glass with rubbing alcohol and dry before applying the foil to all of the glass pieces.

8



I 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 finger 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. I use a variety of foil widths depending on the thickness of the glass.

Flux and solder the foil lines.

9



Apply flux to the copper foil lines. Tack-solder each joint before running a smooth raised bead of solder on the front and back. Do not solder all the way to the edge, since that will cause the zinc frame to not fit the panel.

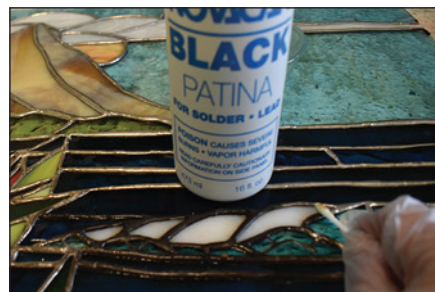
Thoroughly clean the project using Kwik-Clean to remove any residual flux.

10



Apply the Novacan black patina.

11



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

Polish the panel.

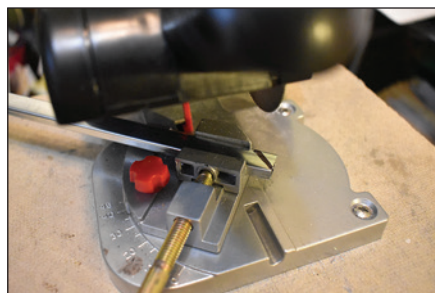
12



Add a thin layer of Liva Stained Glass Polish. After the polish has dried, wipe it off using cotton rounds. Use cotton swabs to reach any hard-to-get places.

Prepare the U-channel zinc came that will frame the panel.

13



Mark the direction of the cut on the zinc before using the 2" cut-off saw. Cut a notch at both ends of the top pieces of came to provide a place to add the Handy Hangers.

Open the channel on the zinc using a plastic fid/lathekin.

14



15

Secure the glass in the zinc frame.



Horseshoe nails will help to secure the panel when adding the zinc frame. Use a hammer to secure the edges of the glass panel inside the zinc.

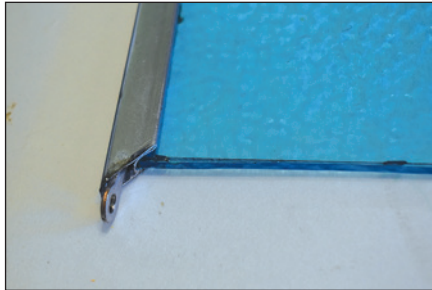
16

Apply flux where the soldered lines meet the zinc, then apply the solder.



17

Add the Handy Hangers.



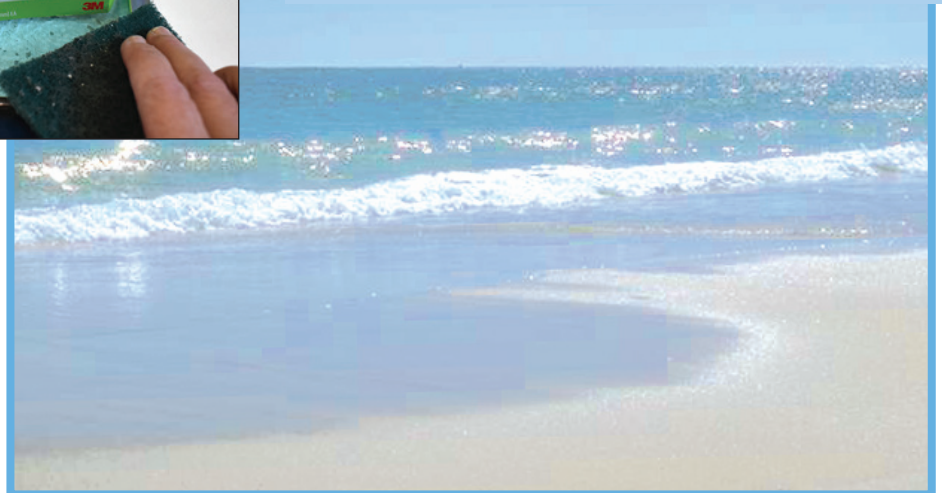
Tin the Handy Hangers with solder, then apply flux and solder to the inside of the U-channel zinc came where the Handy Hangers will be secured. To finish the frame, add the top U-channel zinc came with the notched ends and solder.

18

To finish, scuff up the zinc with a Scotch-Brite pad before applying JAX Pewter Black to the zinc.



This project is now complete and will make a beautiful addition to your own decor. It will also serve as a reminder of how beautiful Hawaii can be. **GPO**



Joe Dwight, a self-taught artist, has been involved in the glass world since 1979 and is skilled in leaded, copper foil, and fused methods. He and his wife Robin live in Kailua, Hawaii, and have been married for 54 years. Joe has designed and built windows in thirteen churches on Oahu and one in Japan, and has also done complete restorations in four churches, including St. Augustine in Waikiki.

The artist has also designed hundreds of windows from New York to Japan. Joe regards his ability to create and build these windows as a gift from God. His most exciting project was St. Elizabeth Catholic Church depicting the stations of the cross that took him two and one-half years to complete. For more of Joe's work, visit www.facebook.com/groups/100948723292469 and Instagram @kaaniani.



Cindy Dow Savary has always had a passion for art and has been a crafter all 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 a piece that would become part of a new Airbnb called Annabella's Studio in Round Rock, Texas. The client, Lisa Loftus-Adams, wanted to honor the memory of her friend Charlie, 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. For more of Cindy's work, visit www.instagram.com/cindy.savary77 or go to www.facebook.com/APassionForGlassByCindySavary.

Dear Heart

Garden Angel Mosaic Dish

Design, Fabrication, and Text by Pat Chase

Photography by Stephen Chase
Computer Support by Carol Grant



This 12"-diameter angel design named *Dear Heart*, is from the second edition of my *Angel Companions* pattern book. There are 20 pieces, and is an easy design to complete. Using a terra-cotta garden saucer, which can be found at garden and home supply stores, makes it a great addition to your porch or summer backyard using mosaic effects. They can be used as a water dish or a garden accent, make wonderful gifts, and in the right climates, they can last for years. Be creative and try this technique on flowerpots too!

Glass

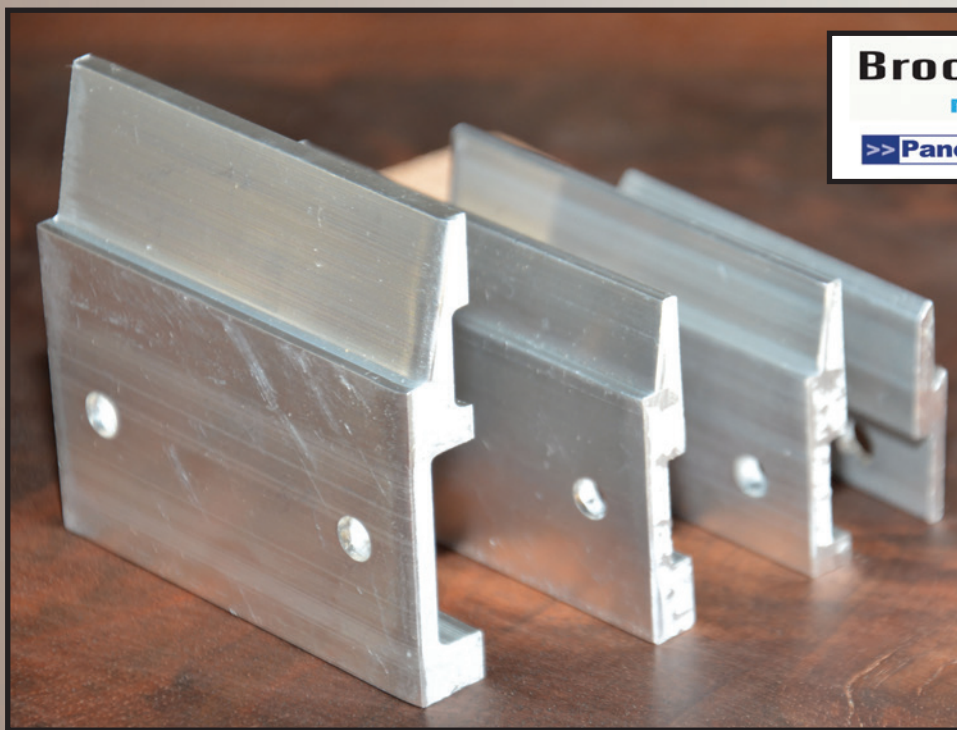
White Iridized for Wings, 6" x 6"
Iridized Cobalt Blue for Body, 5" x 4"
Scrap for Hair, Skin, and Halo in Desired Colors
Assorted Glass Nuggets in Desired Colors

www.YOUGHIOGHENY GLASS.com



TRUE DICHRO

A Scientific Breakthrough in Art Glass Manufacturing
Color Changing Technology



Brooklyn Hardware
MANUFACTURING

>> Panelclip®

V 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

1-888-232-1151

Tools and Materials

12" Terra-Cotta Saucer
2" x 2" Foil Piece
All-Purpose Clear Silicone Glue
Sanded Grout Water
Soft Cloth Grout and Tile Sealer
Old Bowl Spoon
Sponge Kitchen Glove

Make 2 copies of the pattern, with one being 20 percent larger than the other.

1



Having the layout copy larger than the copy used for cutting out the glass pieces will allow for the grout to go into the space between the glass pieces in the dish.

Cut the glass pieces to fit the smaller pattern and grind to fit as needed.

2



Place the glass pieces on the larger pattern to allow for the spaces between them, then clean and dry the pieces.

3



Cut a small piece of foil and attach the sticky side to the halo section, then burnish the foil with your fid.

4

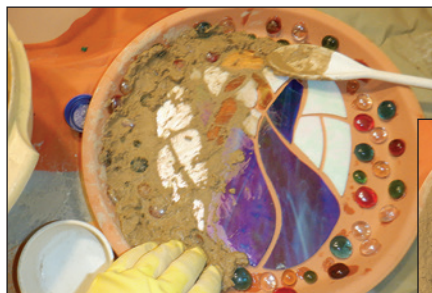


Place the glass pieces in the clean, dry terra-cotta saucer and glue them in place with the silicone glue.

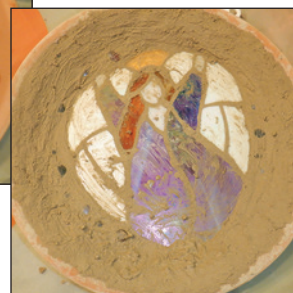
5



Smooth the glue around to completely secure the glass. Add the nuggets in the same way as the glass pieces and let the glue dry, which doesn't take long.



6



Grout the design.

Mix about 2 cups of sanded grout with water to make a paste, stirring well. Wearing gloves, use your hands to make sure the paste gets in between the glass pieces. Fill in where the nuggets are placed and smooth the grout, avoiding the rim. Using a damp sponge for that is helpful.

Remove any excess grout, polish the design, and seal the grout.

7



Let the design dry enough to be able to remove the excess grout with a damp sponge, and you will see a white haze. Carefully polish the design with a soft cloth after it is completely dry and apply the grout sealer as directed on the bottle. It may take a few days for the dish to completely cure.

I look forward to making these decorations for my yard and garden every year when summer returns. Once you have made one of these dishes, I think you will want to make more too. Have fun and play in the mud!

GPO

Pat Chase has been creating stained glass art since 1997, when she began working out of a studio in Maltby, Washington. She trained under Deverie Wood, who gave her invaluable guidance when Pat began to publish her own designs. Her first angel pattern, Grace, was created for Christmas 1999 and led to the beginning of Pat's angel pattern collections. As Pat shared recently, "The positive response I have received has given me the passion and encouragement to continue with this artwork all these years. I love what I do!" Her Angel Companions and Angel Companions II pattern collections are both available by visiting www.AngelsGlassArt.com or by contacting Pat directly at ponygal67@gmail.com.



Pat and Stephen, her husband of 52 years, have been keeping busy at home in Port Hadlock, Washington, with their three cats as they garden, cook, bake, and listen to their favorite Bluegrass music. While they miss their friends and family dearly, they have been keeping healthy and isolated. They are grateful for their angel guides who have been watching over them.

© Copyright 2022 by Glass Patterns Quarterly®.
All rights reserved.

Stained Glass Made Easy



By WWC, LLC
TABLE FOILER
Folios 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



Works with ALL grinders!

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

www.TableFoil.com

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
Frederick, MD

Find us on:

www.anythinginstainedglass.com





GPQ 2022 Design Contest Winner

Congratulations to Kathy Darneille

Design by Kathy Darneille, Text by Darlene Welch



We are thrilled to introduce Kathy Darneille, winner of the Glass Patterns Quarterly 2022 Design Contest for *Birds of Summer*, her 46-3/4" x 15-1/4" stained glass entry. When Kathy first decided almost nine years ago that she wanted to learn how to create stained glass art, there weren't any beginner classes starting in her area for several months. To get a head start on learning the skills she would need, she decided to search for YouTube videos, joined a couple of groups on Facebook, started practicing, and was able to figure out most of the techniques she would need on her own. By the time there was a class available nearby, she decided that

she would rather spend her money on the stained glass and other supplies she needed to build the designs she dreamed of creating.

Kathy works part-time as a graphic artist in a sign shop, so it wasn't long before she decided that she could design her own patterns on her computer using a combination of Photoshop and CorelDraw. As Kathy describes it, "My house is filled with pieces I've made, and I've created lots of gifts, as well as a few donations and commissioned pieces." She also has a Facebook page, Painterkat Stained Glass, where she posts photos of a lot of her work. Be sure to view all of her charming stained glass designs. **GPQ**

© Copyright 2022 by Glass Patterns Quarterly®. All rights reserved.

Purchase Forever Links to Recorded Glass Expert Webinars®

Don't miss this chance to learn from the full chat between the industry's best teachers and students who attended the live Webinar classes.

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



Sand to Glass
with David Alcala

Visit the Glass Expert Webinars® link on the GPQ home page, then select Recorded Webinar Links for a list of 50+ currently available recordings.

www.GlassPatterns.com

OVER 'N' OVER Reusable Glass Etching Stencil



Transform ordinary glass into amazing **ETCHED GLASS!**

1000'S OF DESIGNS AVAILABLE



Armour
PRODUCTS

FUN • EASY • CREATIVE



WWW.ARMOURPRODUCTS.COM
SALES@ARMOURPRODUCTS.COM
PHONE: (973) 427-8787

Got the Fever for Spring projects?...
we've got the cure!

GlasDesign
Presents:
"Flowers",
"Spring" & more ...

Email: glasdesign@etchmaster.com
www.etsy.com/shop/GlasDesignPatterns

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.AngelsGlassArt.com

Pat Chase Ponygal Productions
360-385-3457 • ponygal67@gmail.com



Wholesale Inquiries Welcome • www.AngelsGlassArt.com

Iris

Design by Evamarie Volkmann, Text by Darlene Welch

The tall, stately iris is named for Iris, the Greek goddess of the Rainbow. There are some 300 species of irises, the most familiar of which are the bearded ones, which can reach two to three feet in height. These sought-after garden flowers are featured in this lovely 10-1/2" x 15-1/2" design from the *Summer GlasDesign* pattern pack by Evamarie Volkmann. Included in this collection of unique patterns are designs that will provide loads of ideas for creating the perfect accent for a friend's or your own home decor. For more GlasDesign patterns, visit www.etsy.com/shop/GlasDesignPatterns.

GPQ



Wissmach Glass Co.

91-D Dense Opal/Light Purple for Background Sky, 1-1/2 Sq. Ft.

WO-5 Gold Pink/Aqua/Light Opal/Crystal Wispy
for Background Water, Scrap

245-L Medium Amber/True Green/Opal/Crystal Streaky
for Leaves, 1 Sq. Ft.

245-D Medium Amber/True Green/Dense Opal/Crystal
for Stems, Scrap

VM-163 Mauve Green/Opal Victorian Mottle for Flowers, Scrap

94-L Medium Purple/Amber/Opal/Crystal Streaky
for Flowers, Scrap

WO-238 Dark Purple/Dark Blue/Opal Crystal Wispy
for Flowers, Scrap

Tools and Materials

7/32" Copper Foil Flux
Solder Black Patina

© Copyright 2022 by Evamarie Volkmann
and Glass Patterns Quarterly®.
All rights reserved.

Copyright 2022 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.



Iris

Design by Evamarie Volkmann

Wissmach Glass Co.

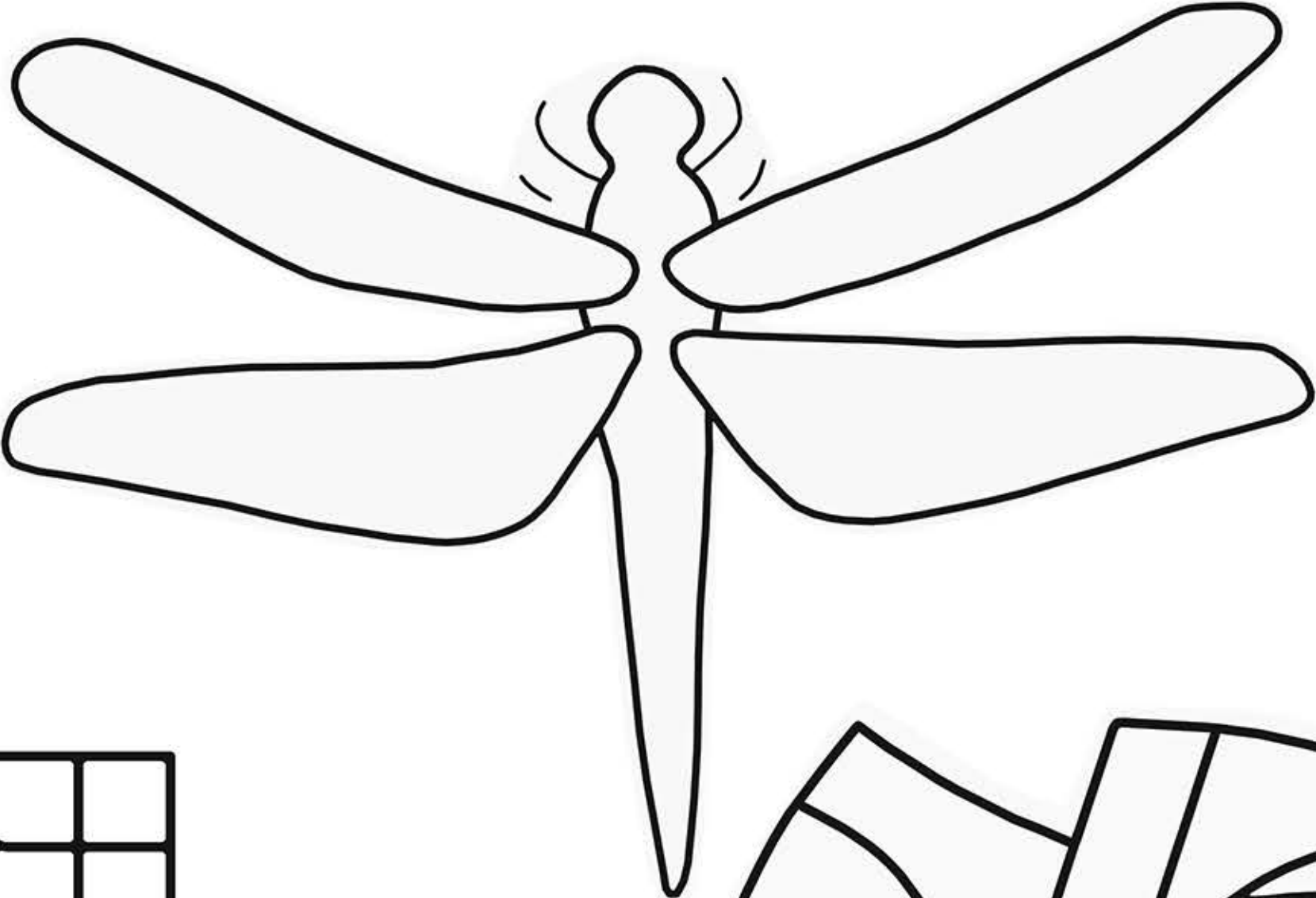
91-D Dense Opal/Light Purple for Background Sky, 1-1/2 Sq. Ft.
WO-5 Gold Pink/Aqua/Light Opal/Crystal Wispy
for Background Water, Scrap
245-L Medium Amber/True Green/Opal/Crystal Streaky
for Leaves, 1 Sq. Ft.
245-D Medium Amber/True Green/Dense Opal/ Crystal
for Stems, 1 Sq. Ft.
VM-163 Mauve Green/Opal Victorian Mottle for Flowers, Scrap
94-L Medium Purple/Amber/Opal/Crystal Streaky
for Flowers, Scrap
WO-238 Dark Purple/Dark Blue/Opal Crystal Wispy
for Flowers, Scrap

Dragonfly Garden Stakes

Design by Lianna Bodzin

Glass

Clear or Cathedral Glass for Top Wing Layers, 6" x 10"
Clear 1/4" Glass for Bottom Wing Layers, 6" x 10"
Opalescent Glass for Top Body Layer, 6" x 2"
Opalescent Glass in the Same or Complementary Color
for Lower Body Layer, 6" x 2"
Stringers, Dichroic Pieces, Frit, or Fire Sticks for Decoration
Glass Dots for Eyes

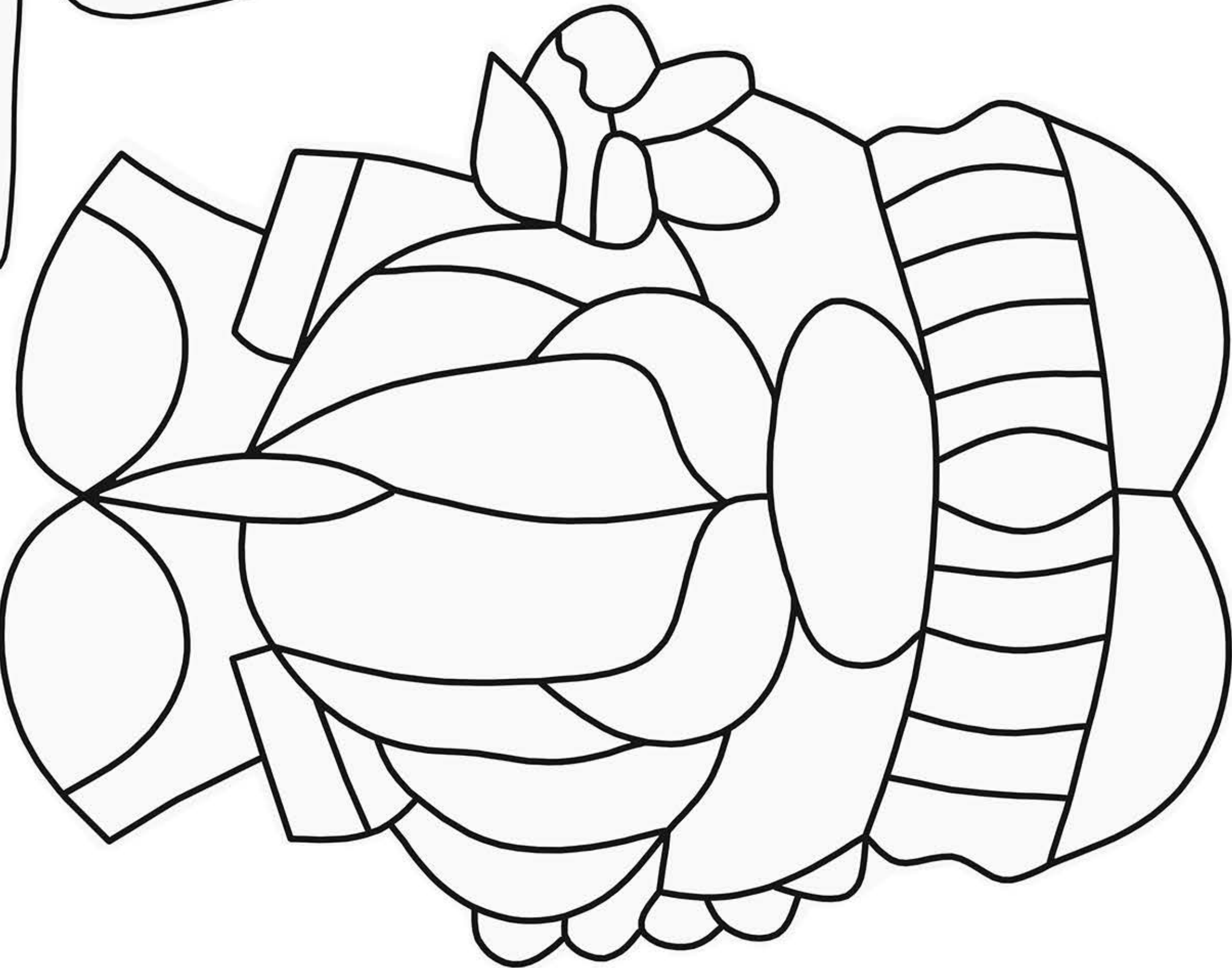


Hippie Dude

Design by Sabine Moberger

Glass

Assorted Bright Colors, Scrap



Soul Surfing Mandala Ocean Visions

Design by Leslie Gibbs

Glass

3 mm 90 COE Straight Firesticks for Waves, 4
90 COE Blue-Gold on Ripple for Border, 5" x 8"
Light Orange Iridized Optional Color
for Border, 5" x 8"
Neo-Lavender Iridized
for Background Wedges, 8" x 12"
White Iridescent for 2 Surf Boards, 4" x 5"
Turquoise Blue Iridescent
for 2 Surf Boards, 4" x 5"
Emerald Green Iridescent
for 2 Surf Boards, 4" x 5"
Light Cyan for 2 Surf Boards, 4" x 5"
Glass for Waves (all thin)
Light Aquamarine Blue Iridescent
for Inside Curls, 2" x 8"
Turquoise Blue for Outside Curls, 2" x 10"
Warm White for Wave Foam, 2" x 10"

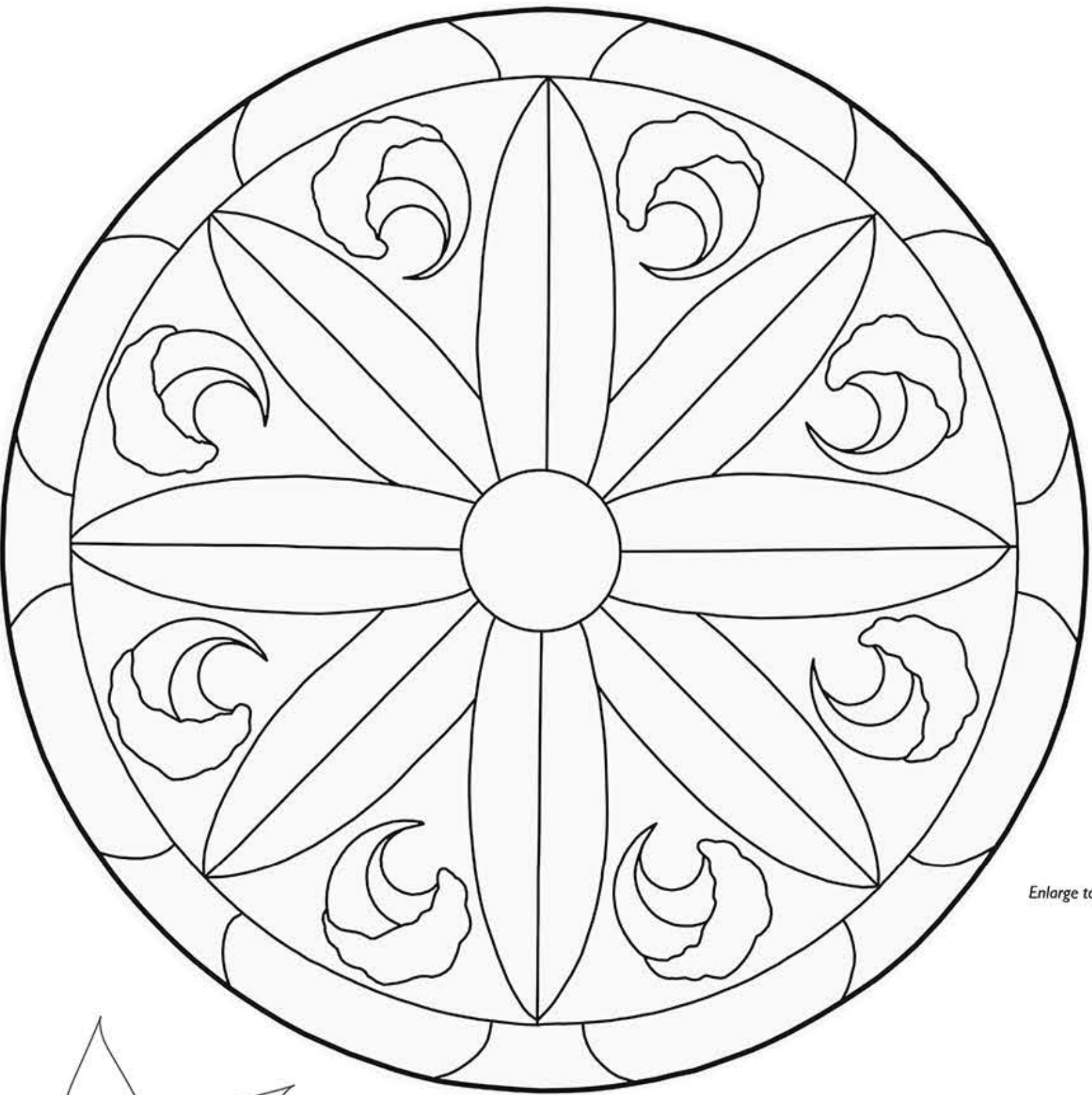
Glass Frit

Warm White Fine for Foam Spray, 3 Tbs.
Light Cyan Fine for Blue Spray Mix, 1 Tsp.
Cobalt Blue Medium for Blue Spray Mix, 1 Tsp.
Light Sky Blue Fine for Blue Spray Mix, 1 Tsp.

Additional Glass

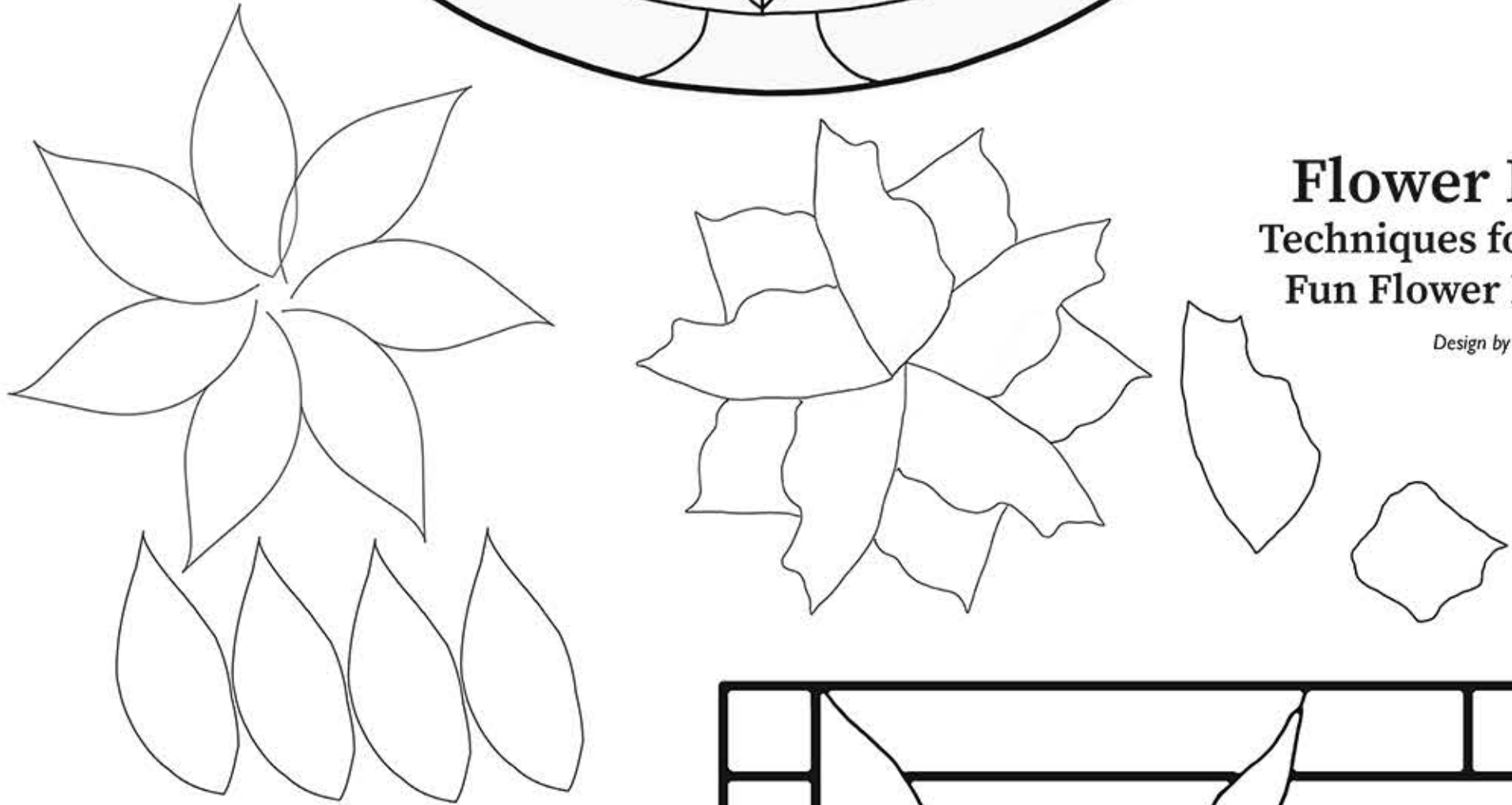
1-3/4" Round Moon/Sun Face Gem or Faceted Gem

Enlarge to Desired Size



Flower Power Techniques for Creating Fun Flower Blossoms

Design by Petra Kaiser

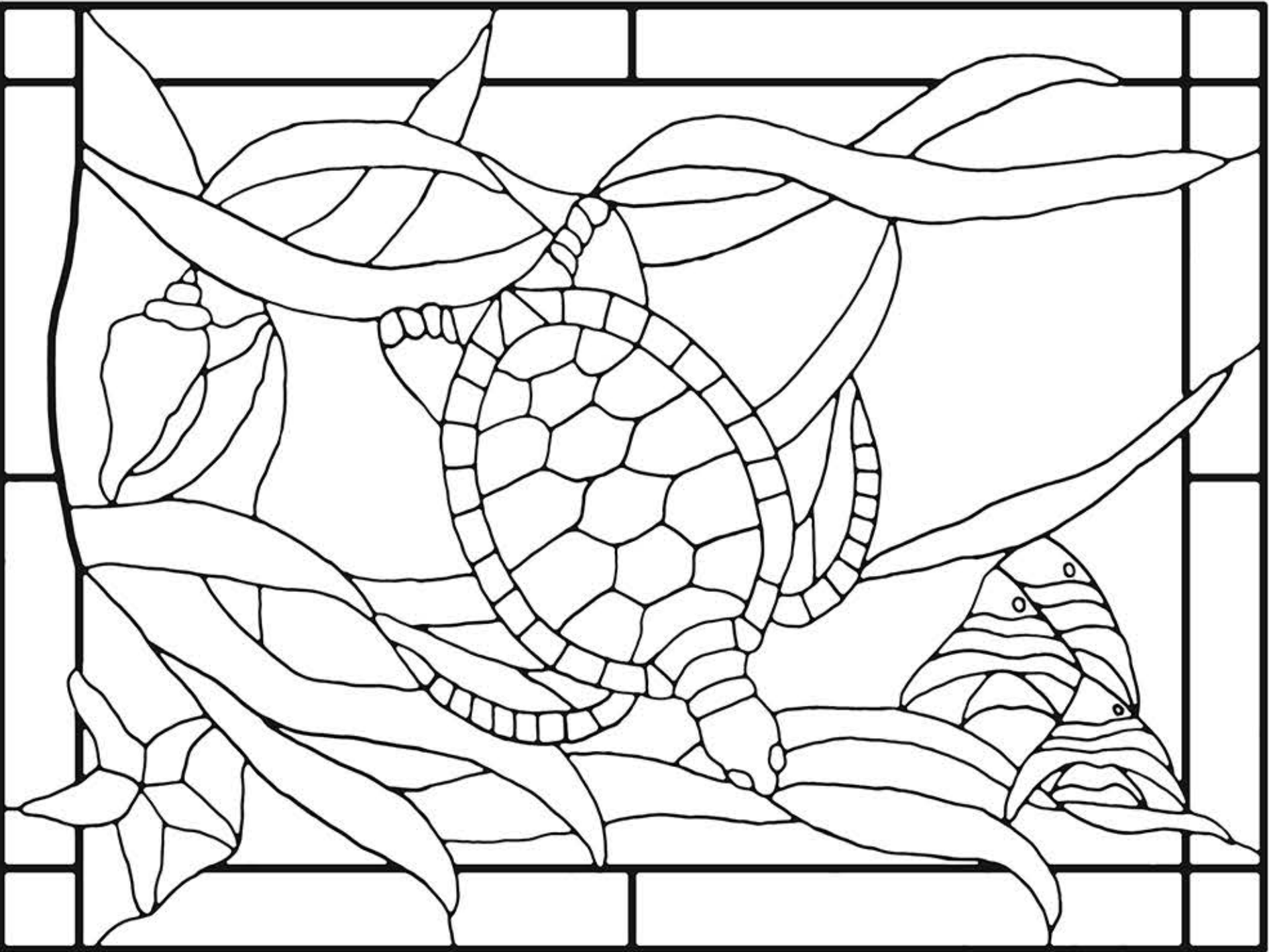


Wissmach Glass Co.

96-67 Luminescent Clear, 6" x 12"
96-11 Honey for Yellow Blossoms, 6" x 12"
96-94 Red for Red Blossoms, 12" x 12"
96-55 Garden Green Luminescent for Leaves, 6" x 12"
Additional Glass
Orange Fine Frit
Red Fine Frit

Design by Susan Walker Bowen

Sea Turtle



Youghiogheny Opalescent Glass
1002155 Blue Opal/Amber High Shine
for Ocean Floor, 12 Sq. Ft.

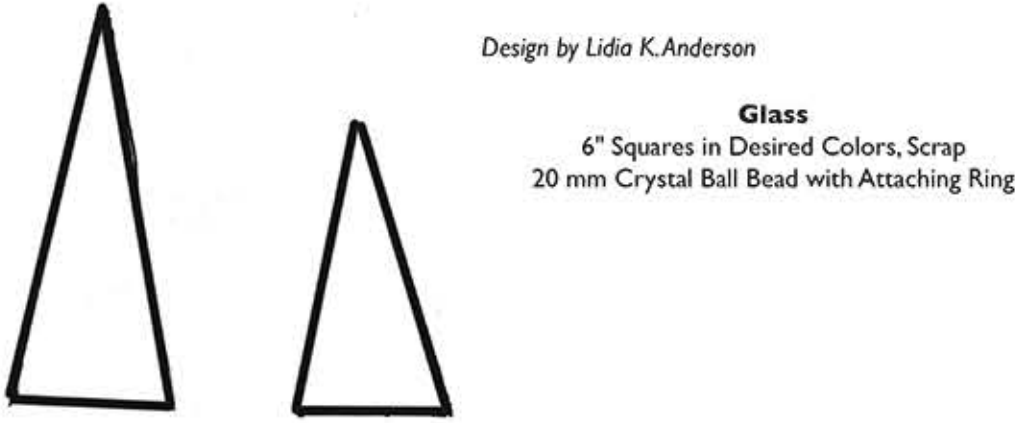
Additional Glass

Dark Green Lime Green/Opal Clear Streaky
for Seaweed, 24 Sq. Ft.
Ruby Red/Lime Green/Blue Opal Wave/White
for Turtle, 12 Sq. Ft.
Cobalt Blue/Amber for Border, 1 Sq. Ft.
Key Lime Frit/Amber for Seaweed, 1/2 Sq. Ft.
Deep Steel/Sky Blue Waveglass Frit/Amber
for Ocean, 1-1/2 Sq. Ft.

Glass Cat from Scrap

Amber/Glass Chip for Seaweed
Pink Glass for Coral Shell
Yellow for Angel Fish
Green for Turtle
Grape Rough/White for Angel Fish
Black Waterglass for Angel Fish
Emerald Green Opal for Turtle

3-D Summer Suncatcher
An Introduction to Stained Glass

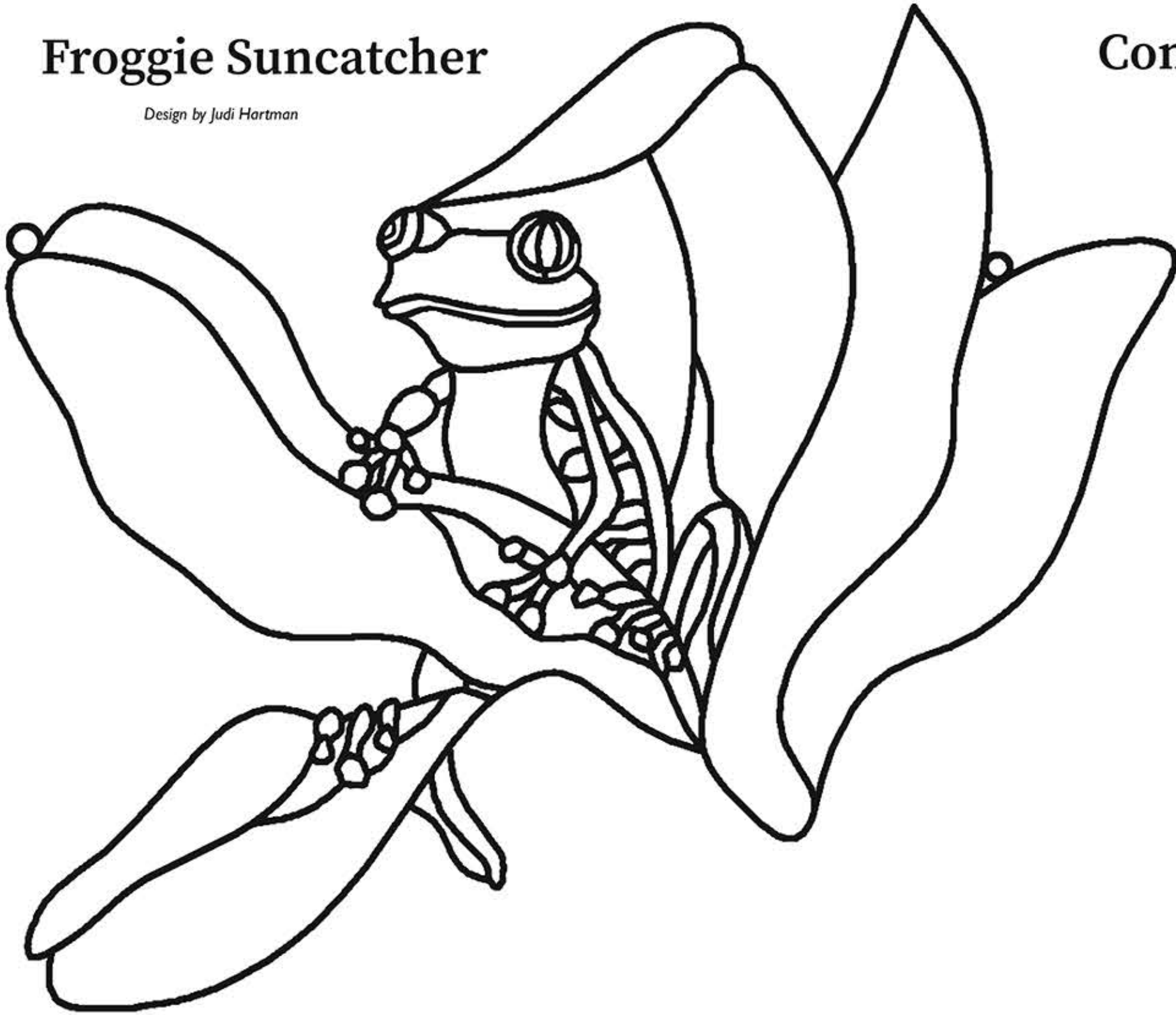


Design by Lidia K.Anderson

Glass
6" Squares in Desired Colors, Scrap
20 mm Crystal Ball Bead with Attaching Ring

Froggie Suncatcher

Design by Judi Hartman



Wissmach Glass Co.

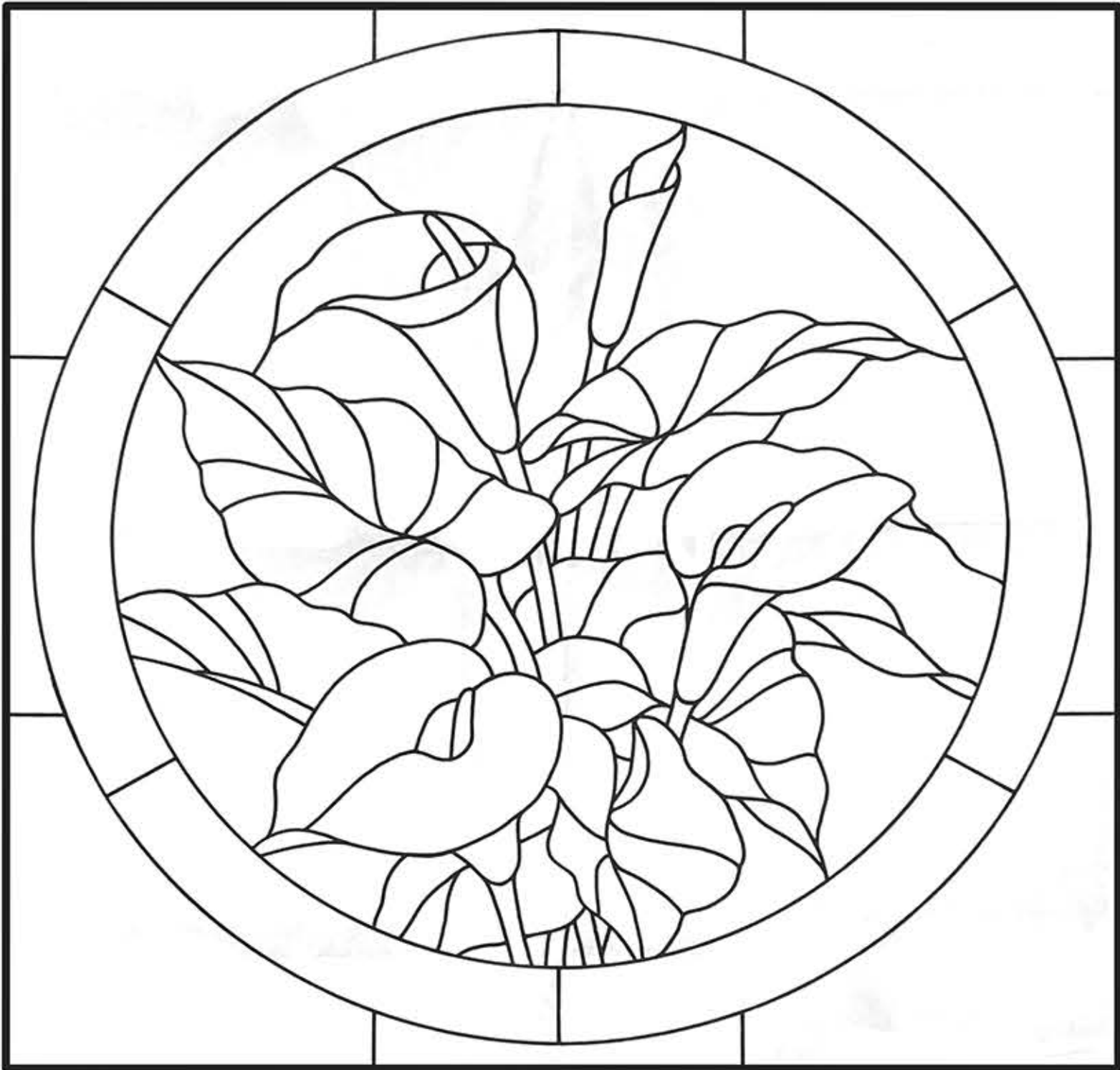
708-LL Light Green/Dark Green Mystic Streaky for Green Leaves, 1 Sq. Ft.
702-LL Medium Green/Dark Blue/White Opal Mystic Streaky for Green Leaves, 1 Sq. Ft.
57-LL Medium Green/Opal/Crystal Streaky for Frog Head, Body, and Legs, Scrap
WO-197 Dark Blue/Medium/Opal/Crystal Wissspy for Frog Stripes, Scrap
317-D Dark Amber/Dense Opal for Toe Pads, Scrap
Black for Mouth and Eyes, Scrap
18-LL Light Orange Streaky Double Rolled for Eyes, Scrap

Calla Lilies

Design by Terra Parma

Wissmach Glass Co.

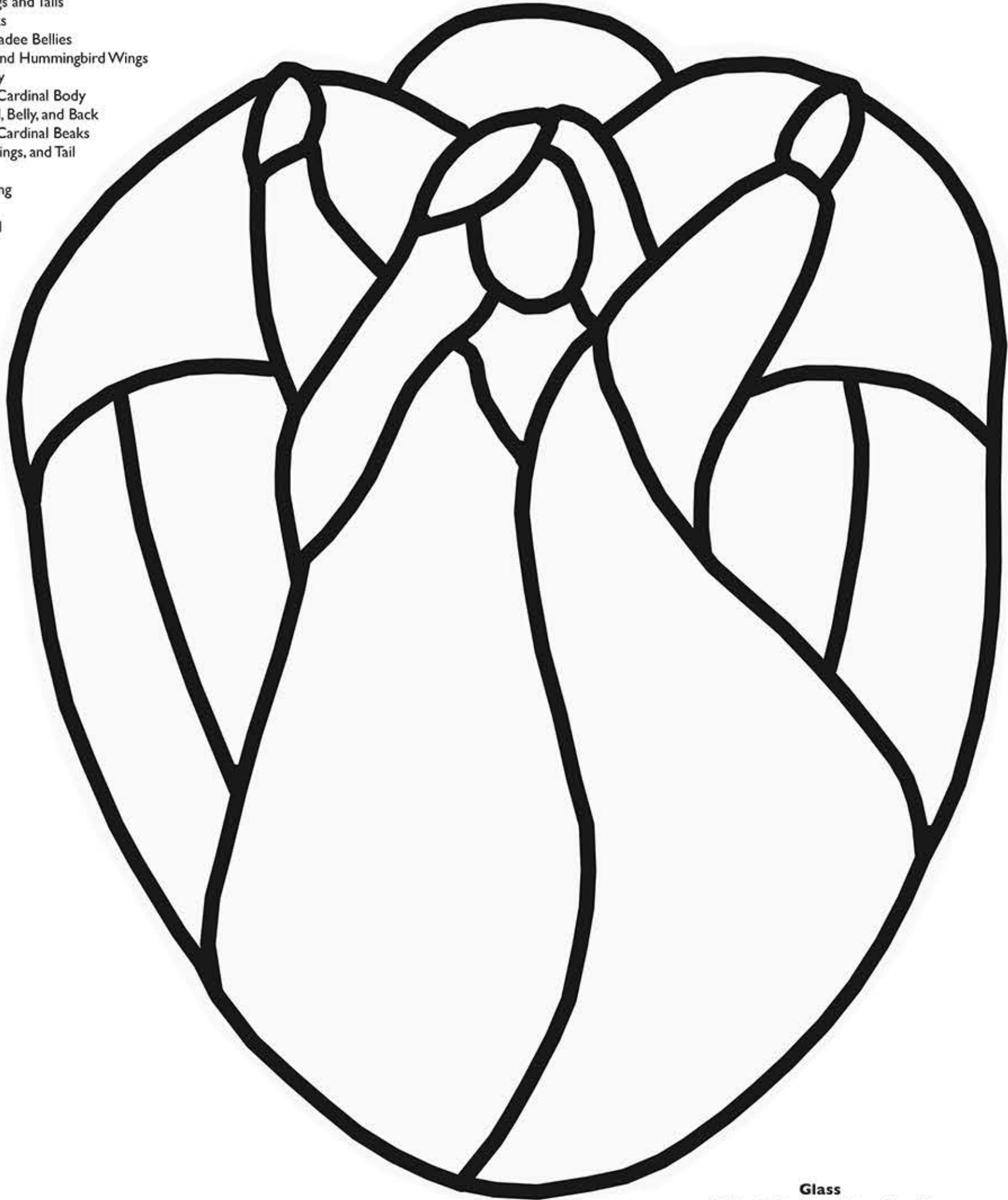
325-D Light Amber/Dense Opal/Crystal for Inner Background, 2-1/4 Sq. Ft.
94-L Medium Purple/Amber/Light Opal/Crystal for Outer Border, 2-3/4 Sq. Ft.
WO-503 Steel Blue/Opal/Crystal Wissspy for Round Inner Border, 2 Sq. Ft.
100-sp Dark Green/Light Opal for Leaves, 1-3/4 Sq. Ft.
WO-57 Medium Green/Opal/Crystal Wissspy for Flower Stems, Scrap
569-D Champagne/Dense Opal/Crystal for Flowers, 1 Sq. Ft.
2-D Yellow/Dense Opal/Crystal for Flower Centers, Scrap
Additional Optional Glass
20" Round x 1-1/2" Wide Bevels (6)



GPQ 2022 Design Contest Winner
Congratulations to Kathy Darneille

Design by Kathy Darneille

Glass
Pale Blue Textured Transparent for Sky Background, 3-1/2 Sq. Ft.
Dark Green Streaky for Leaf Halves, 1-3/4 Sq. Ft.
Yellow Green Streaky for Leaf Halves, 1-3/4 Sq. Ft.
Reddish Brown for Branches, 1/2 Sq. Ft.
Pale Amber Streaky for Inner Border and Morning Glory Center, 1/2 Sq. Ft.
Medium Amber Streaky for Center Border and Morning Glory Center, 1/2 Sq. Ft.
Dark Amber Streaky for Outer Border, 3/4 Sq. Ft.
Black Opalescent Glass
for Bird Wings, Heads, Chins, Eyes, Feet, and Hummingbird Beak, 1/4 Sq. Ft.
Glass Cut from Scrap
Lilac for Morning Glories
Gray/Green for Morning Glory Vine
White Opalescent for Blue Jay and Chickadees
Dark Gray for Feet and Beaks
Bright Yellow for Goldfinch Head and Body
Light Gray for Blue Jay Head, Belly, and Hummingbird Belly
Medium Blue for Blue Jay Head, Back, and Tail
Dark Blue for Blue Jay Tail and Wings
Light Blue/Gray for Hummingbird Tail
Medium Blue/Gray for Hummingbird Tail
Blue/Green for Hummingbird Head, Back, and Wings
Dark Reddish Brown for Chickadee Wings and Tails
Gray/Brown for Chickadee Backs
Pale Amber for Tufted Titmouse and Chickadee Bellies
Medium Gray for Tufted Titmouse Head, Back, Wings, and Hummingbird Wings
Pale Beige for Woodpecker Belly
Bright Red for Woodpecker Head and Male Cardinal Body
Medium Reddish Tan for Female Cardinal Head, Belly, and Back
Medium Red for Female Cardinal Wings and Cardinal Beaks
Dark Blue for Hummingbird Head, Back, Wings, and Tail
Additional Materials
Black Patina for Woodpecker Wing
Steel Wool
3/16" Black-Backed Copper Foil



Dear Heart
Garden Angel Mosaic Dish

Design by Pat Chase

Glass
White Iridized for Wings, 6" x 6"
Iridized Cobalt Blue for Body, 5" x 4"
Scrap for Hair, Skin, and Halo in Desired Colors
Assorted Glass Nuggets in Desired Colors



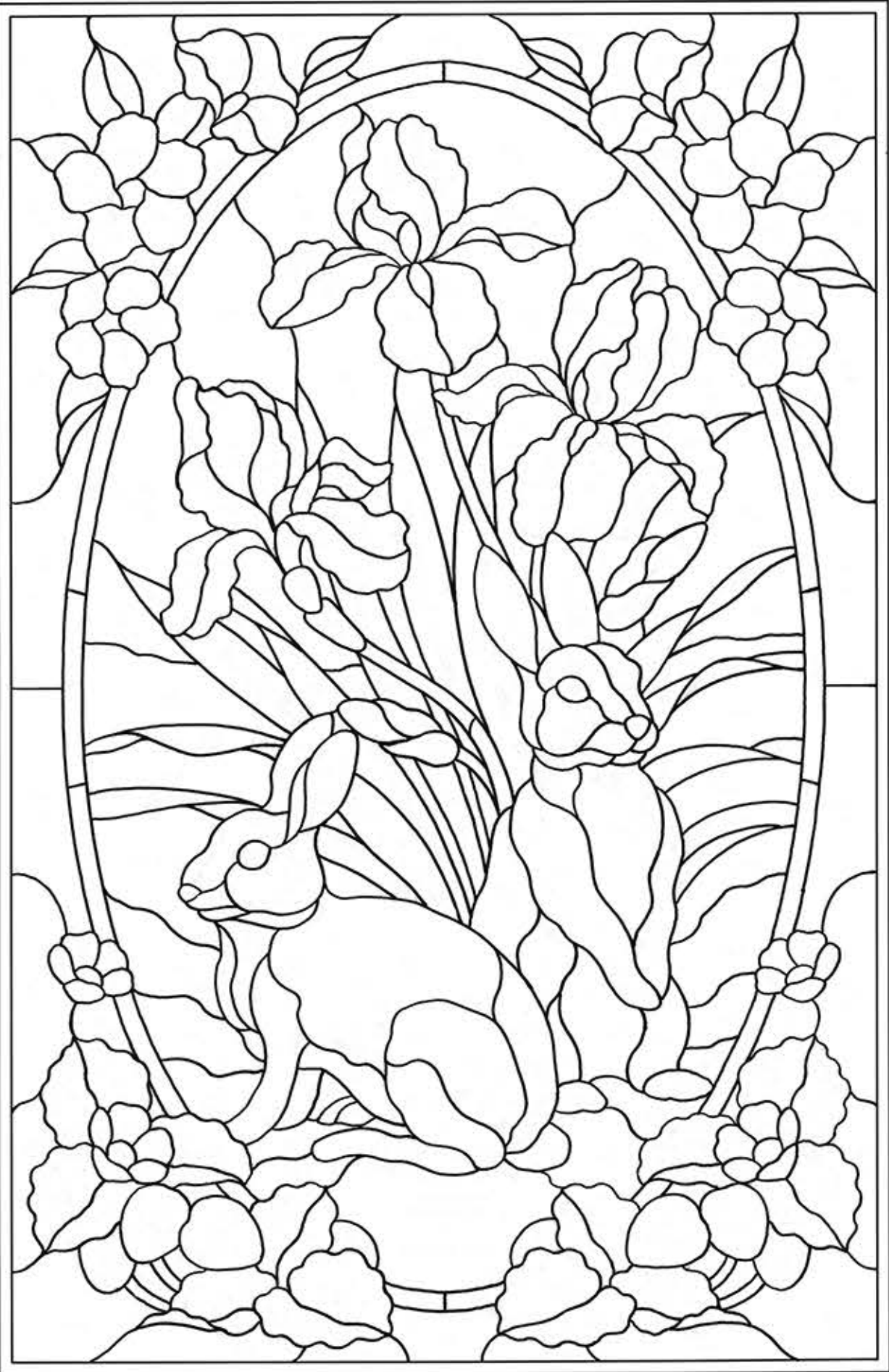
Diamond Head Sunrise

Design by Joe Dwight

Youghiogheny Opalescent Glass
U-57-912 Butterscotch/Coffee Fipple Texture for Volcano, 1 Sq. Ft.

Wissmach Glass Co.

300 Medium Sky Blue Classic for Sky, 1/2 Sq. Ft.
319 Flemish Olive Green Cathedral for Plants, 1/2 Sq. Ft.
Additional Glass
Tight Ripple
for Ocean, 1/4 Sq. Ft.
Lighter Green Wavolite
for Palm Tree Leaves and Background Trees, 1 Sq. Ft.
Deep Steel/Sky Blue Waterglass Fusible for Ocean, 1/2 Sq. Ft.
Pearl Fusible for Clouds, 1/2 Sq. Ft.
Clear/Ivory Fusible for Beach Sand, 1 Sq. Ft.
Lime Green/White Fusible for Plants, 1/3 Sq. Ft.
Glass Cut from Scrap
Orange for Sun
Firelight/White Opalescent for Ocean
Medium Blue Ripple for Ocean
Medium Violet for Bird of Paradise Plants
Orange for Bird of Paradise Plants
Green for Bird of Paradise Plants
Medium Amber/Opal Granite for Palm Tree Trunk
Medium Amber for Coconuts
Textured Green for Plants
Medium Yellow Green for Plants



Bunnies in the Garden

Design by Justin Behnke

Youghiogheny Opalescent Glass

4554 SP Lime Green Ice/Silver Yellow/Emerald Green Stipple for Petunia Leaves, Scrap
Y96-360 Violet for Iris Flower and Iris Fields, 3/4 Sq. Ft.
4302SP White/Avocado Green/Black Stipple for Foreground, 1 Sq. Ft.
Wissmach Glass Co.
WO-708 Light Green/Dark Green/White Opal Wissspy for Iris Leaves, 1/2 Sq. Ft.
Additional Glass
Black for Inner Border, Scrap
Streaky Dalle for Petunia Flowers, 1/2 Sq. Ft.
Brown/Green Opal for Strawberry Blossom Centers, Scrap
Cerise Ruby for Strawberries, Scrap

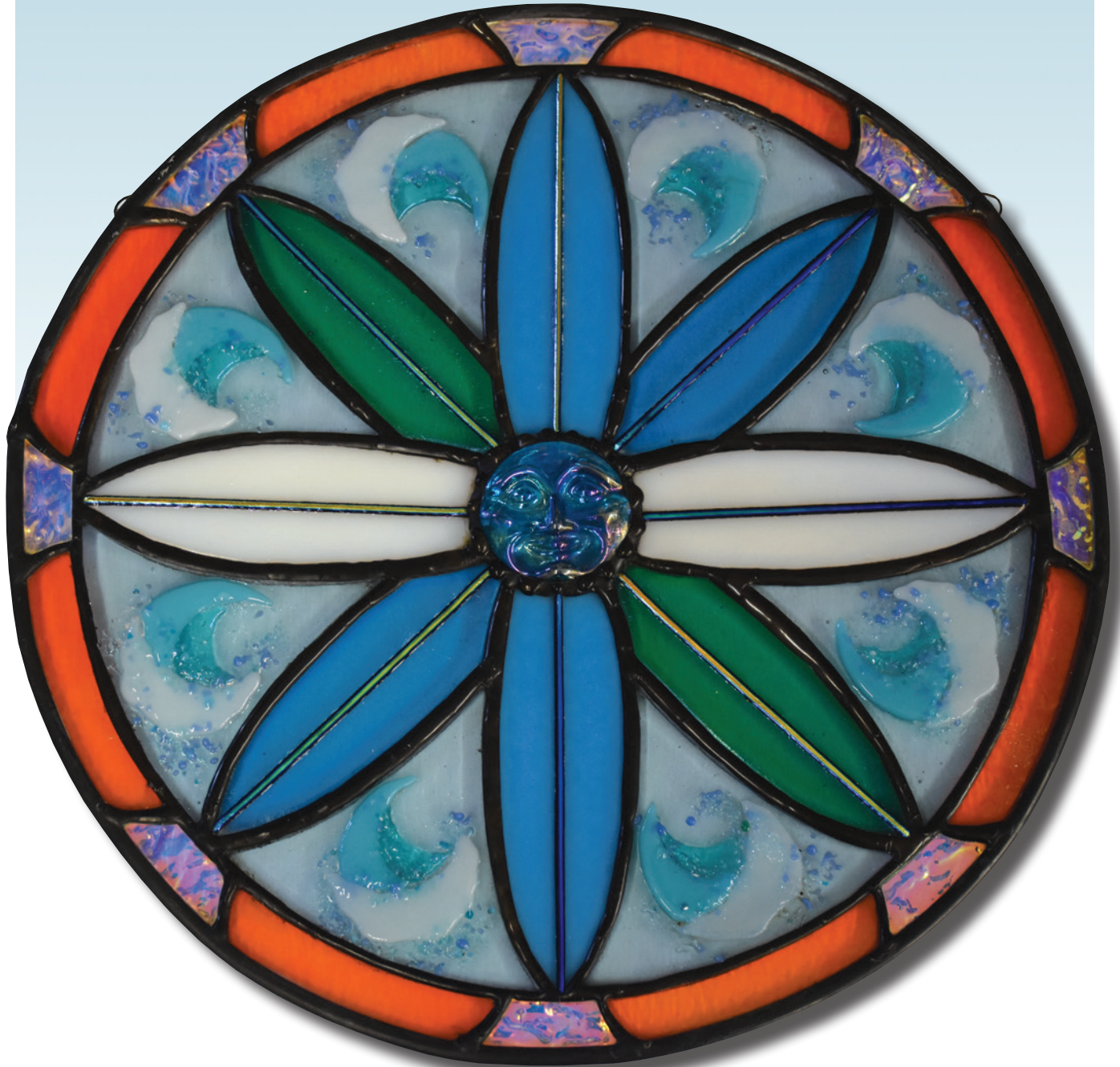
Dark Amber/Opal for Rabbits, 1/2 Sq. Ft.
Soft Gray/Opal for Rabbits, 1/2 Sq. Ft.
OB Sky for Background, 1 Sq. Ft.
Caramel Opalume/Lime Green/Brown for Midground, 1/2 Sq. Ft.
Clear Rough Rolled Waterglass for Border Background, 1/2 Sq. Ft.
White Waterglass for Strawberry Blossoms, Scrap
Green for Iris Stem, Scrap
Yellow for Strawberry Blossom Centers, Scrap
Light Green for Strawberry Stems, Scrap

Soul Surfing Mandala

Ocean Visions

Design, Fabrication, and Text by Leslie Gibbs

Photography by Jon Gibbs



Surfers often lead wild lives as they strike out across the globe in search of the perfect waves and get into all kinds of misadventures along the way. I'm well aware of that, since our son and his friends are surfers and have had their share of escapades on their quests for that historic swell.

Surfers, however, are much more than beach drifters. The ocean currents that shape the waves also shape the person riding the board. Daydreams can turn into dream days, and reflection can lead to the peace found on that journey. I have designed this 11-1/2" wave/board mandala to inspire others, even if they have never seen an ocean, to have that inner vision of soul surfing.

Glass

3 mm 90 COE Straight Firesticks for Waves, 4
90 COE Blue-Gold on Ripple for Border, 5" x 8"
Light Orange Iridized Optional Color
for Border, 5" x 8"

Neo-Lavender Iridized
for Background Wedges, 8" x 12"
White Iridescent for 2 Surf Boards, 4" x 5"
Turquoise Blue Iridescent
for 2 Surf Boards, 4" x 5"
Emerald Green Iridescent
for 2 Surf Boards, 4" x 5"
Light Cyan for 2 Surf Boards, 4" x 5"

Glass for Waves (all thin)

Light Aquamarine Blue Iridescent
for Inside Curls, 2" x 8"
Turquoise Blue for Outside Curls, 2" x 10"
Warm White for Wave Foam, 2" x 10"

Glass Frit

Warm White Fine for Foam Spray, 3 Tbs.
Light Cyan Fine for Blue Spray Mix, 1 Tsp.
Cobalt Blue Medium for Blue Spray Mix, 1 Tsp.
Light Sky Blue Fine for Blue Spray Mix, 1 Tsp.

Additional Glass

1-3/4" Round Moon/Sun Face Gem or Faceted Gem

Tools and Materials

Cotton Swabs Novacan Black Patina
Toothpicks Soft Artist Paint Brushes
GlasTac Gel Craft Adhesive
1/8" Fiber Paper Small Spoon for Frit
Small Container Needle Nose Pliers
Old Toothbrush Horseshoe Nails
Flux Remover Soft Cloths
Zinc or U-Came Lead Hanging Hooks
Liva Stained Glass Polish
3/16" and 7/32" Silver-Backed Copper Foil
4 Small Kiln Posts

1

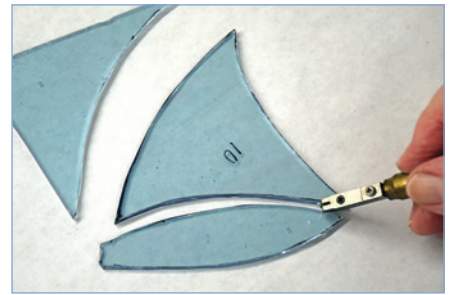
Make three
copies of the
design.



There are several steps that require fusing, so you will need 3 copies of the pattern, one for layout and two more for cutting and fusing.

2

Cut out all
of the glass
pieces.



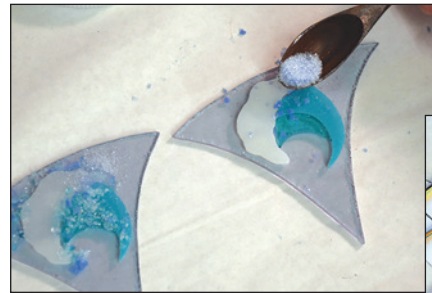
The border glass shown here is dichroic, but you can also use a hot color iridescent. If you go with dichro, be sure you cut it on the backside. Cut out each of the sections to be fused, the waves, the surfboards, and the background glass.

3

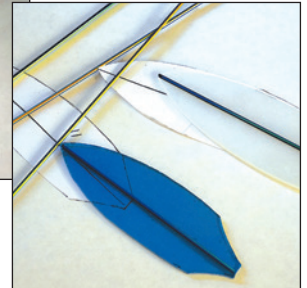
Grind and
clean all of the
sections, making
sure that the
wave sections
fit snugly.



4



Add the frit details to the waves
and the Firesticks to the surfboards.



You'll be using the white frit around the top spray of the waves. The light cyan, cobalt blue, and sky blue frits will be mixed together along with some white for the spray accents between the wave curls.

Using craft adhesive and a toothpick, place a tiny dot of adhesive onto each segment of the wave and position the wave on the background glass. When the wave segments are dry, paint a thin layer of adhesive or GlasTac gel around the crest of the waves and sprinkle liberally with the white frit to create a surf spray. Also add a small amount of adhesive to the curl of each wave and add a sprinkle of the blue frit mixture. When the frit is dry and secure, brush off the excess with a soft paint brush.

Cut the dichroic Firesticks to fit down the center of each surfboard. Line the black back side of the Firesticks with adhesive and place them onto the boards. Secure the Firesticks on either side with 1/8" fiber paper to prevent them from shifting during fusing.



5

Fuse the wave wedges.

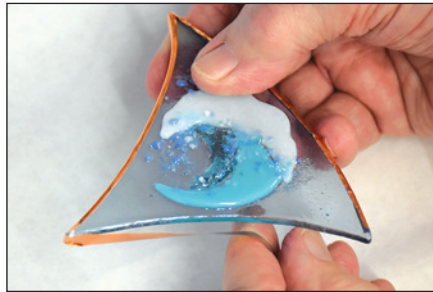


Both the wave wedges and the surfboards will be fused, but I fused them separately since they are different thicknesses. Place the boards on the kiln shelf, vent the kiln to burn off the adhesive, then slowly ramp to 900°F. Close the kiln and slowly ramp to a tack fuse, around 1400°F. You will need to monitor your own kiln, since they all react a bit differently.

When you are satisfied with the look of the pieces, turn off the kiln and let it come down to room temperature. Use the same procedure with the wave wedges. We want a tack fuse with some definition for the frit.

Wrap each section of glass, the sun/moon face gem, and the faceted gem in copper foil and place them on the layout pattern for soldering.

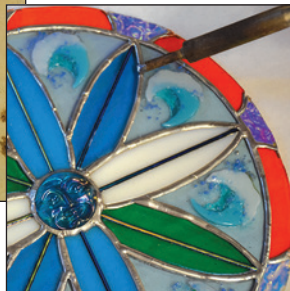
6



7

Solder the panel.

Secure the panel with horseshoe nails to prevent shifting while soldering the front of the panel. Turn the panel over and support the front with small kiln posts, since the center gem may cause the panel to wobble, and solder the back of the panel. Clean both sides with flux remover.



8

Frame the panel.



It's your choice whether to frame the piece in zinc or U-came lead. I chose lead for my panel. Wrap the piece with your choice of framing material and secure the framing in place with horseshoe nails. Solder the framing to any solder lines it connects with and also where the framing ends meet. Do this on both sides of the panel. Clean up with flux remover.

9

Solder hanging hooks onto solder lines about 8" apart on the top back of the panel.



10

Using cotton swabs, apply the black patina to both sides of the panel, the framing, and the hooks.



Clean the glass when finished and let it dry.

11

Apply polish to the panel and buff when dry.



Using a clean soft cloth, apply the polish to the panel. Be sure to avoid the wave curls, since it is difficult to get the wax off of the frit. Let the polish dry to a soft haze, then carefully buff it with a second clean cloth. You may also use an old toothbrush to get polish off of any hard to reach areas.



Please plan on joining your friends and colleagues both familiar and new for a momentous, inspirational, and thought-provoking conference that will bring every facet of our industry together in celebration.

**Art Salon &
Fundraising Auction
Joint Exhibition: ADJOINED
Workshops & Demos
Vendor Marketplace
Networking & Mentorship
Panels & Seminars
Factory Tours**

June 27-30, 2022

Renaissance Toledo Downtown Hotel
444 N Summit St, Toledo, OH 43604

**Find more information at
stainedglass.org &
americanmosaics.org**



The word *mandala* means circle in Sanskrit and is usually applied to meditation or a spiritual journey. The purpose of such a journey is to help transform minds to enlightenment and healing. As glassers, we can certainly use the second function. Whatever you are seeking—comfortable studio shoes, inspiration for your creativity, or just a good Thai restaurant—it can't hurt to take some time to slow your thoughts and contemplate a colorful glass mandala, or if you prefer, contemplate a colorful glass full of merlot! Whatever works!!

GPO

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 to learn more about Leslie and her art.

© Copyright 2022
by Glass Patterns Quarterly®. All rights reserved.



FOIL REVOLUTION, LLC
COPPER FOIL OVERLAYS

**READY TO USE Adhesive Copper Foil Overlays
For Professional Results**

**Made from EDCO 1.25 mil
Adhesive Backed Copper Foil**

**Add whimsical elements and
textures to any piece!**

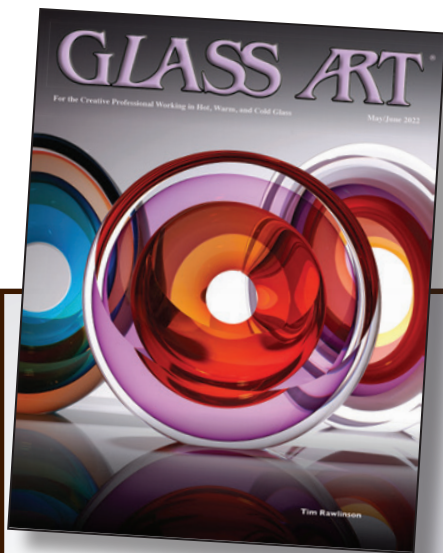
The possibilities and time savings are endless

**We offer seasonal overlays
including Halloween and Christmas
Stock up now!**

**Custom work available
including letters**




Visit us at:
FoilRevolution.com
Wholesale pricing available



On the cover of the May/June 2022 issue of Glass Art®,
Tim Rawlinson.
Photo by Sylvain Deleu.

Above: Laura Hart.
Photo by Simon Bruntnell.

For the creative professional working in hot, warm, and cold glass

502.222.5631
info@GlassArtMagazine.com

www.GlassArtMagazine.com

Sunshine Glassworks Ltd.



Choose from over 65 profiles of lead, zinc, copper and brass came from **CASCADE METALS**.



Offering a vast selection of glass paints, stains, enamels and painting supplies from **REUSCHE, FUSEMASTER and PETER McGRAIN**.



Fuse Master



111 Industrial Parkway
Buffalo NY 14227-2712

www.SunshineGlass.com

Toll-free: 800-828-7159
info@sunshineglass.com

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

Summer Oceans, Shells, and Sand

Kiln Casting with Sand Molds and Core-Making

Design, Fabrication, and Text by Mark Lauckner

Here is a project built on a summer oceans, shells, and sand theme that mounts onto a garden gate. We'll be using foundry sand to make thick kiln castings plus cores made from steel rod to produce mounting holes right in the glass casting. When it's finished, the kiln cast plaque will be approximately 3/4" thick.

To begin, make a mold boundary in your desired size out of pieces of kiln brick. You'll need to bind the kiln bricks together on a kiln shelf with long wood screws and stainless wire. You will also need to paint shelf primer on the inside of the mold where the glass will be making contact with the bricks.

Next, prepare the fine silica sand that will fill the mold by mixing the sand with about 15% Bentonite clay powder. You will want to mix them together outdoors to avoid inhaling any of the dust. It's also a good idea to wear a mask while mixing the sand and powder.

Moisten the sand mixture with about 1/3 cup water per gallon of dry mix. The Bentonite acts as a binder and helps the sand stay in position when it's pressed into the mold.



1

Fill the mold dam with the damp sand mixture.



After thoroughly mixing the sand and water, lightly press the sand into the mold area about 1" thick.

2



Press the shells and starfish into the sand to create the design.



Glass

Clear Scrap Fusible Glass

Tools and Materials

K-23 Kiln Brick Scrap Pieces

Starfish and Assorted Shells

Screws

Stainless Wire

Fine Silica Sand

Bentonite Clay Powder

Water

3/16" Stainless Rod or Similar Material

Shelf Primer

Paint Brush

The fine sand mixture holds incredible detail when the objects are firmly pressed down into the damp sand. If the sand shows crack lines around the objects, flatten the sand down a little firmer before pressing in the objects. If the shells and starfish stick to the sand, try sprinkling a bit of dry sand over the top of each one before pressing.

Dry the core pegs after dipping them in thick primer.

3



Dip the cores into thick mixed shelf primer and let them air-dry, then apply one more coat of primer. I leave enough coated length exposed to extend above the level of the finished glass about 1-1/2".

After having previously set the sand mold aside to air-dry for a few days, I prefire the mold in a kiln at 400°F per hour to 1300°F to completely dry it out. This also helps the clay to strengthen.

Press the core rods into the sand near the corners to make holes in the damp sand.

4



These are called cores in the metal casting industry and are used to create hollow spaces in castings. The pieces of 3/16" stainless rod will make mounting holes to match the diameter of the wood screws.

Stick the core rods into the damp sand near each corner to make positions to hold them steady after the mold is fired and the sand has firmed up. Don't put them too close to the edges, because you don't want them to obstruct the glass, which needs to be able to seep around them to completely fill the corners.

Carefully dab shelf primer on the baked sand mold.

5



After the coated core pegs are placed into the holes, carefully apply the shelf primer to the prefired sand mold. I prefer to dab a soft paintbrush onto the sand that is filled with fairly thin shelf primer; as a brushing motion can disturb the sand packing. Now it's time to begin filling the mold with the scrap glass pieces.

Place some glass pieces behind the core pegs.

6



Start by placing thin strips of the clear scrap glass behind the pegs to ensure that the glass can freely flow around them into the corners. The glass can become a bit obstructed with the pegs sticking up so close to the edges.

Fill the rest of the mold with the clear fusible glass scraps and fire the mold.

7



Place a large volume of the fusible scrap glass in the center of the mold, being careful not to let any of the glass touch the sides. The location of the glass volume is important, because if it can flow outwards to the edges and rise up the sides to level off, the result is nice rounded edges with no sharp little bits sticking up. Now the mold is ready to fire using the following firing schedule. Remember that all kilns tend to fire differently, so you may need to adjust the schedule to fit your own kiln.

Firing Schedule

Segment 1: Ramp slowly at 350°F/hr to 1500°F. Peek in to decide when it is ready to drop down, usually around 1 hour.

Segment 2: Anneal for 2 hours.

Segment 3: Cool slowly overnight.

I tend to run these up around 350°F per hour and peek in at around 1450°F to decide how long I want to hold it at 1500°F. I want to stop heating before any small bubbles rise to just below the surface. I prefer to use scrap glass for these castings, and flat wide pieces can certainly trap air!

Clean off the sand from the finished piece.

8



After annealing for a couple hours and slow-cooling overnight, I remove the glass slab from the mold and brush off the sand, which can be remoistened and reused over and over again.

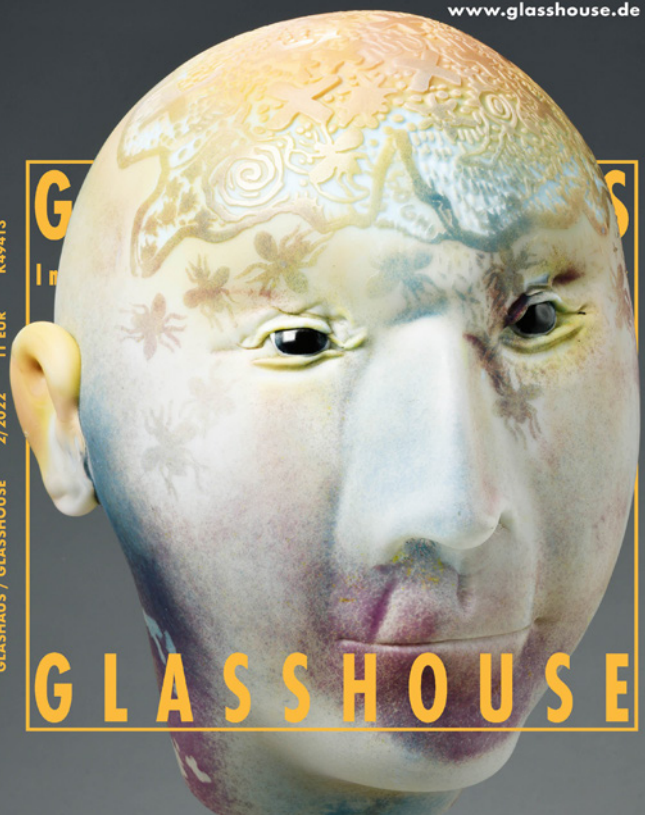


Mark Lauckner Tutorials

- Join Mark Lauckner's Glass Tutorials on Patreon.com
- Fresh Ideas In Fused Glass
- Embossing dichroic glass, mold making, millefiori, jewellery, kiln building, over 100 tutorial videos
- Each process explained step-by-step




www.Patreon.com/MarkLauckner



www.glasshouse.de

GLASSHAUS / GLASSHOUSE 2/2022 11 EUR K49413

GLASSHOUSE

Montserrat Duran Muntadas Stefan Godecki Coburger Glaspreis 2022 Lara Saget Alena Mateika

9

Remove the core pegs from the mounting holes to finish.



The core pegs pull out nicely, and I have a finished piece with nicely rounded edges that is ready for mounting on my garden gate!

GPO

Mark Lauckner has been working in glass since 1977, first in stained glass, then lampworking in 1979, warm glass in 1984, and hot glass since 1996. He has operated The Glass Factory, a production hot shop and fusing studio, for 26 years along with an adjacent gallery located on Salt Spring Island, British Columbia, the "arts mecca" of Western Canada.



The artist has remelted over a quarter of a million pounds of scrap glass and created over 180,000 cast and pressed glass items. His iconic line of marine and rainforest themed recycled glass giftware is available in 70 galleries and gift shops across North America. He has also redesigned equipment used in warm and hot glass studios to make them more energy efficient.

Mark's glass furnace designs have been in use in over 30 countries for 20 years. Being completely self-taught, he has developed "outside the box" glassmaking processes that have not been seen elsewhere, notably bending the rules in warm glass. Mark has also instructed dozens of kids and adult summer classes annually at The Glass Foundry since 1998 and has produced over 100 tutorial videos for warm glass, hot glass, equipment building, and mold making. For more info on Mark Lauckner and his work, visit www.theglassfoundry.com and www.facebook.com/MarkLaucknerGlass.



Mark's daughter enjoying a day at the beach

© Copyright 2022 by Glass Patterns Quarterly®.
All rights reserved.

Calla Lilies

Design by Terra Parma, Text by Darlene Welch



The calla lily is one of the most stunning flowers to be found anywhere. With its single petal that wraps around itself to create a beautiful statement, these unique blooms are readily recognized and unparalleled. They often appear in wedding bouquets, where they represent devotion and bliss, but they are also prominent in religious imagery, where they represent purity, holiness, faithfulness, rebirth, and resurrection.

These exquisite blossoms are captured perfectly by Terra Parma in this 21" x 21" pattern from her *Images by Terra* collection and is used with permission from the publisher, Stained Glass Images. The classic white are the ones that are seen most often, but calla lilies also come in shades of yellow, orange, pink, rose, lavender, and dark maroon, each color with a meaning of its own. Feel free to select from your favorite colors as you create this lovely panel for your own home decor. **GPQ**

Wissmach Glass Co.

325-D Light Amber/Dense Opal/Crystal
for Inner Background, 2-1/4 Sq. Ft.

94-L Medium Purple/Amber/Light Opal
for Outer Border, 2-3/4 Sq. Ft.

WO-503 Steel Blue/Opal/Crystal Wisspy
for Round Inner Border, 2 Sq. Ft.

100-sp Dark Green/Light Opal for Leaves, 1-3/4 Sq. Ft.

WO-57 Medium Green/Opal/Crystal Wisspy
for Flower Stems, Scrap

569-D Champagne/Dense Opal/Crystal for Flowers, 1 Sq. Ft.

2-D Yellow/Dense Opal/Crystal for Flower Centers, Scrap

Additional Optional Glass

20" Round x 1-1/2" Wide Bevels (6)

Tools and Materials

7/32" Copper Foil Flux Solder Black Patina

© Copyright 2022 by Glass Patterns Quarterly®. All rights reserved.

Making Heat Work for You

by Bob Leatherbarrow



Dark reaction rims around the jade pebbles in this roll-up are the result of increased heatwork achieved through multiple firings.

ing temperature. Heatwork is also cumulative. Every time a project is refired in the kiln, the amount of heatwork stored in the piece increases. That is, for each firing of a piece to the same process temperature at the same ramp rate, the piece looks more fully fused (Figure 2).

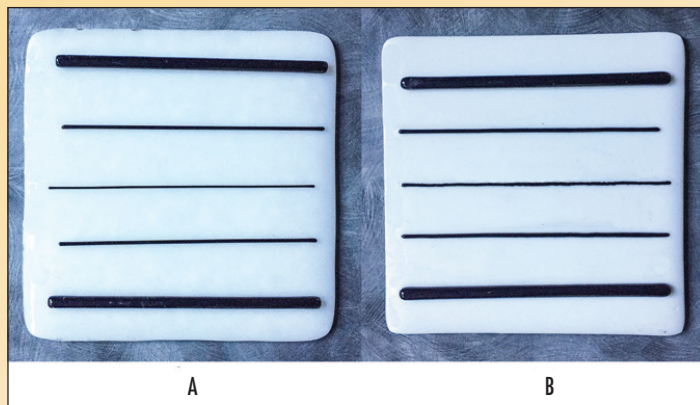
Heatwork has an important relationship to the chemistry of some glass colors. Striker glass, which may appear transparent or translucent before firing, changes in color or hue with increased heatwork. Bullseye Gold Purple Opalescent and Ruby Red Tint are examples of striker glass. A 45-minute soak at 1250°F is necessary for these glasses to achieve the amount of heatwork needed for attaining their target colors (Figure 3).

Glass such as Bullseye Opaline increases in opacity with increased heatwork. With moderate heatwork, Opaline exhibits a milky white, somewhat fiery translucence (Figure 4). With increased heatwork, Opaline becomes opaque. Increased heatwork also enables reactions between chemical compounds within the glass—for example, copper and sulphur—to result in darker colors as the reaction progresses to completion. Excessive heatwork can cause colors to diverge from their target color or opacity. It can also cause them to undergo a compatibility shift resulting in breakage. This applies, for example, to cadmium and selenium bearing colors such as reds, oranges, and yellows.

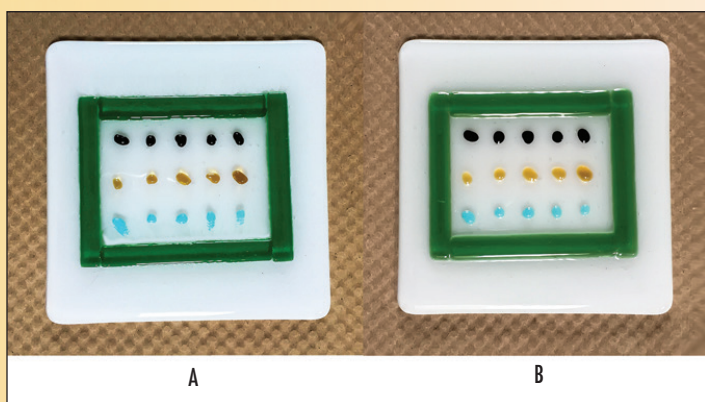
Every time you program a firing schedule for your kiln formed glass project, you are not only determining a ramp rate up to a process temperature and a hold once you get there, but also the amount of heatwork being stored in your artwork. What is heatwork? It is the combined effect of temperature and time on glass, the temperature of which is between the softening point (the temperature at which glass may slump under its own weight) and the process temperature (from slumping to full fuse). What does the impact of heatwork look like? The greater the amount of heatwork, the more completely fused the piece will look.

Understanding the Basics of Heatwork

Here are some important facts about heatwork. Glass heated slowly, for example at 300°F/hr, above the softening point exhibits more heatwork, or a greater degree of fusing, than glass heated quickly, for example at 600°F/hr (Figure 1). Heatwork increases in glass not only during heating above the softening point to the process temperature but also as it cools back down to the soften-



(Figure 1) Stringers and rods heated at different rates to the same temperature show different amounts of heatwork. Tile A was heated at 600°F/hr and shows less heatwork than Tile B, which was heated at 300°F/hr. Stringers and rods heated at different rates to the same temperature show different amounts of heatwork and degrees of fusing.



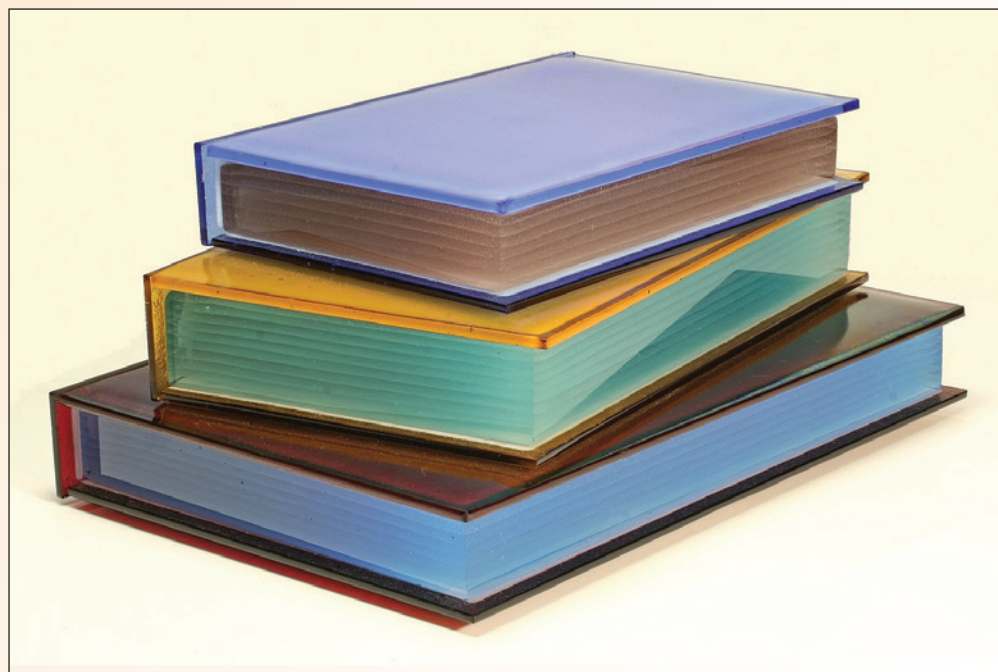
(Figure 2) Repeated firing of the same tile at the same ramp rate (300°F/hr) to the same target temperature (1380°F) shows increased heatwork. Tile A was fired once, was heated at 600°F/hr, and shows less heatwork or degree of fusing than Tile B, which was fired three times.

Benefits of Low-and-Slow Firing Schedules

That's all very interesting but how do we take the impact of heatwork into account when developing kiln formed glass firing schedules? There is more than one way to fire a project to get the same fused look. The same amount of heatwork, expressed as the same degree of fusing, can be achieved by firing to a lower temperature with a long soak or by firing to a higher temperature with a short soak or no soak at all, using the same ramp rate. However, firing slowly to a target temperature results in more heatwork than if you fire quickly. Frequent discussions on social media indicate that there are two schools of thought on how to develop firing schedules. Some artists prefer the high-temperature approach, and others prefer the low-temperature approach. From a heatwork point of view, both of these approaches work.

By heating to a lower temperature for a longer period of time using the low-and-slow approach, you have more control over the outcome of the process. The low-and-slow approach can be applied to any kiln forming process. Full-fusing at a lower temperature, say 1450°F, for a longer soak, say 30 to 45 minutes, can help reduce the size of bubbles caused by air trapped between layers, improve the crispness and quality of lines, and reduce or eliminate the bonding of kiln wash onto the glass. You have the time to observe when the surface of the glass first becomes flat, and by advancing to the annealing schedule, limit the opportunity for bubbles to grow.

(Figure 3) Heatwork was used to mature the striker marigold colored book cover to its target color and to design a low-and-slow approach to ensure bubble-free pages.



For tack fusing, taking a low-and-slow approach results in sharper contacts between the design elements and the base glass as well as better bonding of the design pieces. Again, you have the time to make critical observations. The onset of slumping depends on many factors and is easiest to determine by taking the low-and-slow approach. You can make observations and reposition the glass on the mold if it is slumping unevenly. You can also reduce marks on the underside of the bowl where the glass touches the mold by observing when the glass initially fills the mold and advancing the controller to the annealing part of the schedule. The low-and-slow approach also reduces the variation in glass thickness in dropout molds.

A corollary of the low-and-slow approach is that heatwork cannot be reversed, so the effects in an overfired project are permanent. By firing with minimal heatwork, it is possible to monitor the firing and prolong it as necessary to get the desired effect.

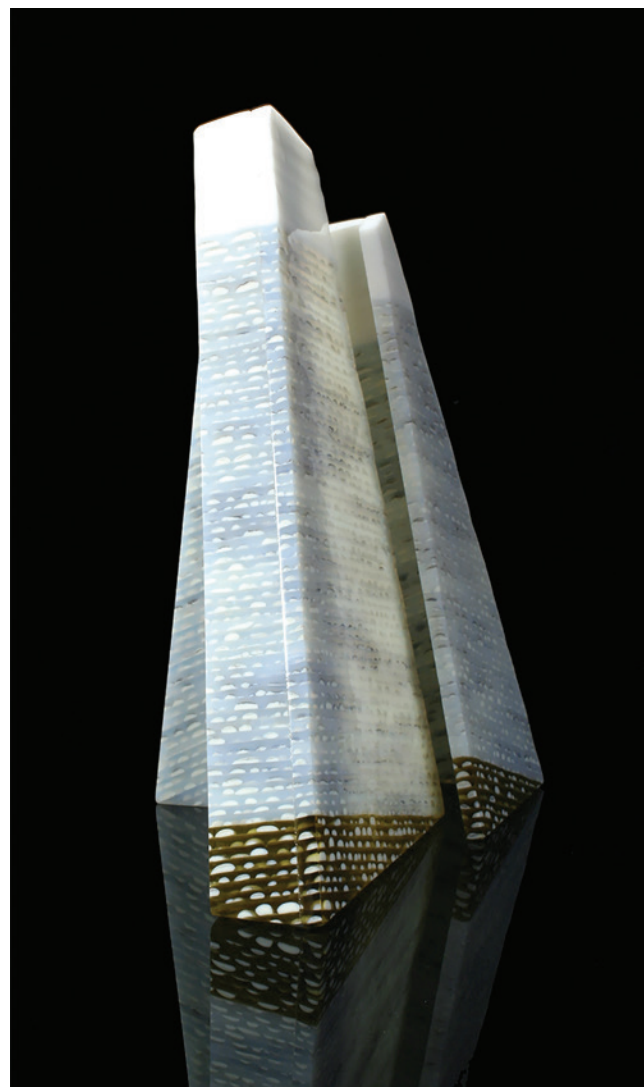
Additional Considerations

It's important to consider the cumulative impact of heatwork when projects are fired multiple times. If the project calls for multiple firings to the same process temperature, say for a tack fused piece, it may be appropriate to underfire in the initial firing so that later firings will result in sharp contacts.

Finally, plan your firing schedules to optimize heatwork. If striker glass is used, increase the heatwork by including a hold at 1250°F to ensure that the color matures to the desired hue and opacity. If the glass is susceptible to devitrification and/or compatibility shifts, reduce the heatwork by lowering the target temperature or the soak time at that temperature. When using glass in a challenging project that is heatwork sensitive, it is a good practice to test-fire samples using the planned sequence of firing cycles.

The next time you start programming your kiln, think about heatwork as well as the ramp rate, process temperature, and soak time. Your glass will love it!

GPO



(Figure 4) The desired look of soft white translucent Bullseye Opaline glass in Mt. Harris was achieved by testing firing schedules prior to executing the project.

THE
Book on Firing Schedules

FIRING SCHEDULES FOR KILNFORMED GLASS

Just Another Day at the Office

Bob Leatherbarrow

A practical guide for:

- what happens to glass during heating
- designing schedules that work for YOU
- recognizing critical observations during firing
- getting the most from your controller
- problem solving

Purchase at: leatherbarrowglass.com

Bob Leatherbarrow established Leatherbarrow Glass Studio in Calgary, Alberta, Canada, in 1988 and has created original kiln formed glass ever since. Known for his innovative styles, techniques, and designs, he has taken an experimental approach to developing unique textures and color palettes using glass powders. His glass bowls and sculptures explore the subtle hues and delicate beauty of naturally occurring textures and encourage the viewer to ponder their origin.



In 2008 Leatherbarrow moved his studio to Salt Spring Island, British Columbia, where he continues to make glass and write e-books on his signature techniques. He has also been a popular instructor on both the national and international kiln formed glass scenes. Visit www.leatherbarrowglass.com to learn more about his work.

Collect All 24 CD's
Now over 2200 Patterns



All patterns in .JPG, TIF,
& .EYE Formats
www.panedexpressions.com
Visit our site for individual
downloadable patterns!

GAI TOYO TOOLS  45 YEARS OF INNOVATION



The Toyo® Supercutter Series from Glass Accessories International has been the dependable choice of professionals for more than 45 years.

The latest Toyo cutter from GAI is the TC-70 Trac Wheel Supercutter featuring a revolutionary new wheel with micro-notches on the cutting edge. The notches, measured in microns, provide traction to reduce wheel skipping. The result is a clean, complete score and increased wheel life.

The TC-70 is available with a straight or pattern blade and with a brass or contoured acrylic handle.

To see the full line of Toyo tools and locate a dealer, visit:

www.glassaccessories.com

WHITTEMORE-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.whittemoredurgin.com

Visit our fun store:

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

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

Spend some time
at 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.



"SB01"
Safety Break



The Morton System

Morton Glass Works

Don't Do Glass Without It!

Web - www.mortonglass.com

Email - mgw@mortonglass.com

Phone - 309-266-5712

Flower Power

Techniques for Creating Fun Flower Blossoms

Design, Fabrication, and Text by Petra Kaiser



I look forward to the return of summer every year during the time when a wide variety of delightful flowers can be seen everywhere. When they arrived this year, I was inspired to create some unique blossoms and gather them together for this wall panel.

Instead of concentrating on the 9" x 26" finished project, I wanted to show you a few techniques for making the blossoms including: working with patterns, building a simple light box, working with Wissmach luminescent glass, making design elements, and coloring your glass with powders and paints. Hopefully these tips and techniques will help you as you create your own glass art designs.

Wissmach Glass Co.

96-67 Luminescent Clear, 6" x 12"

96-11 Honey for Yellow Blossoms, 6" x 12"

96-94 Red Prisma Crystal for Red Blossoms, 12" x 12"

96-55 Garden Green Luminescent for Leaves, 6" x 12"

Additional Glass

Orange Fine Frit

Red Fine Frit

Tools and Materials

Black Magic Marker®

Papyrus® Kiln Shelf Paper

Drop Light with Long Cord

Morton Cutting Board or White Glass

Cardboard Box Respirator Mask

Kaiser Lee Board Kaiser Lee Sand

Enameling Paint

Making Light Tables and Designing the Patterns

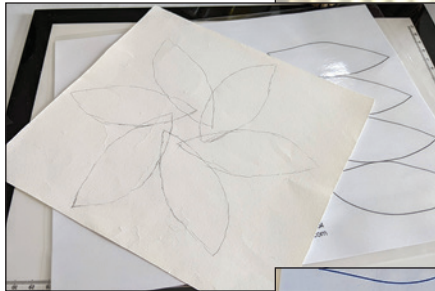
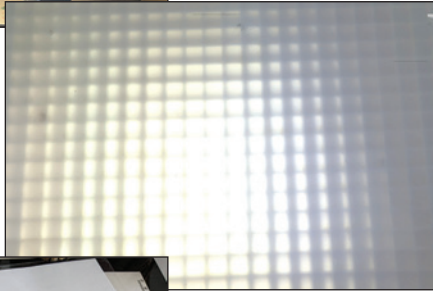
In this tutorial we will be using patterns in different ways. Therefore, it will help to have a light table. Here is an easy way to make one that won't take up any room in your studio once you are done. All you need is a box, a Morton cutting board or a piece of white glass, and a light source. I like to use my shop lamp, which is perfect for the task. I use the light table to trace patterns onto opalescent glass and shelf paper.

When I created my flower patterns, I had several self-supporting flowers on my mind. They are my fantasy flowers, and I did not even attempt to copy mother nature. She is doing such a good job, I didn't think I could compete with her. In the following steps you will see several different ways to use these patterns. I also included a row of petals for more economical cutting. You will find the patterns in the pullout section.



Light box, box, and lamp

Light box cover



Light box pattern transferred to Papyrus Paper



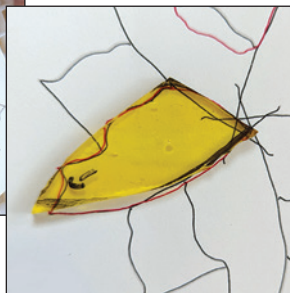
Light box pattern transferred to opal glass

Creating the Blossoms



Transfer the petal pattern in a line along the glass and cut the curves with a mosaic cutter.

1



It is definitely an advantage to have a light box when working with opalescent glass if you are using patterns. Don't worry that you can't cut those exact petals. The beauty lies in the difference.



First I cut the petals with straight lines, and later I use the mosaic cutter to add some curves. Even so I made the pattern, since I like to change it once I work with the glass. For this blossom, I only cut the top petals and added leftover triangles on top of them to connect the petals.

I know they say that black Magic Marker fires off in the kiln, but personally I like to design my pieces without seeing the black lines. Therefore, I always clean them with a mix of 30 percent rubbing alcohol and 70 percent water. You can also put some water and alcohol into a glass container to collect the small cutoffs.



2



Assemble the blossom pieces.

I happened to have a Kaiser Lee Board (KLB) kiln shelf with a light pattern in it and a previously fired piece of Papyrus paper, so I will use them for setting up my blossoms. I have room for at least 3 of the medium size flowers on my pattern sheet. Each one will be a little different.

In the samples shown here, I used small triangles that were left from cutting the petals to connect the petal pieces. For the top blossom, I used clear luminescent glass and little pieces of yellow glass to connect the petals. The one to the left is overlapping a bit and is also decorated with glass bits.

3

Trace the luminescent petals onto the clear luminescent glass.



Working with luminescent glass is very rewarding but a bit tricky, since it is a low fire coating. You achieve the best results when you fire luminescent glass toward the kiln shelf on a piece of shelf paper. It can even make a difference in the outcome whether you are using a new or used piece of shelf paper.

The luminescent side is always the smooth side. Wissmach Glass is pretty smooth on both sides, but one is even smoother than the other. When I draw on coated glass, I like to draw on the uncoated side if I can see through the glass well. The marker stains just come off easier. Then I turn it over to cut on the luminescent smooth side. Finally, I turn them over again and arrange them on the kiln shelf with the luminescent side down. Working with Wissmach Luminescent glass can be tricky, but follow the instructions and you will have success.



4

Fire the blossoms.

This firing schedule is good for all first firings of the flower blossoms.

First Firing Schedule

Segment 1: Ramp 900°F/hr to 1000°F and hold 10 min.

Segment 2: Ramp up 9999 (AFAP*) to 1410°F and hold 10 min.

Segment 3: Ramp down 9999 (AFAP*) to 900°F and hold 45 min.

Segment 4: Ramp down 100°F/hr to 700°F and no hold.

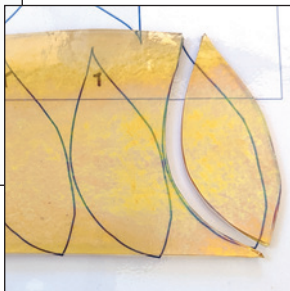
*as fast as possible

There is always the possibility that yellows and reds will strike to a different color when firing. With the batch of yellow shown here, we definitely hit a striker.



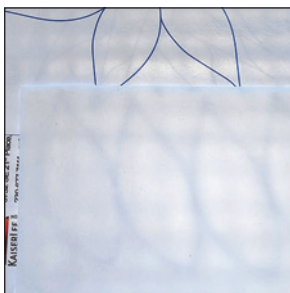
5

Place the luminescent side of the glass up on the pattern sheet when cutting the petals.



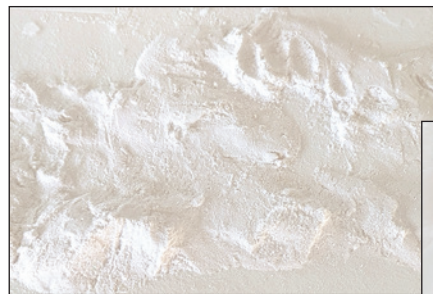
For this flower, I gave you the petal template on the pattern sheet with the petals lined up in a row for more economical use of the glass when cutting. It also has helped a lot to transfer the pattern of the flower onto the Papyrus shelf paper for ease of placement.

Each flower petal overlaps a little bit with the next, so this time I did not need to use the Magic Markers. For additional interest, I added a few bits of honey glass on every other petal. Once I put the luminescent side down onto the prepared shelf paper, you can see that the petals go in the opposite direction, but that's okay. I was still able to use it as a guide.



Wallflowers Wall Art

It took me a while to come up with a project for all my flowers, but with a looming deadline came an idea that I like a lot. I am sure I will try a few more of this kind of wallflower sculptures.



6

Arrange four of the finished blossoms along with some wavy stems made from the Garden Green luminescent glass.



In addition to the blossoms, I cut some narrow leaves from the 96-55 Garden Green/Crystal glass with a luminescent coating and created some wavy sticks over some KLB pieces, which I cut into waves. For added interest, I put down a bed of KLB sand on the shelf and covered it with shelf paper.



7

Fire the wallflower to finish.



Wallflower Firing Schedule

Segment 1: Ramp 300°F/hr to 1000°F and hold 10 min.

Segment 2: Ramp up 9999 (AFAP*) to 1410°F and hold 10 min.

Segment 3: Ramp down 9999 (AFAP*) to 900°F and hold 60 min.

Segment 4: Ramp down 100°F/hr to 700°F and no hold.

*as fast as possible

One More Way to Use the Patterns

You can use the patterns to draw the outline with some enameling paint. I found one, the Spectrum MultiPen, that fires shiny like glass. Then fire the piece to set the enamel paint at 1180°F before you fill it with frit. You can also just fill it carefully with frit and pieces and place it on a KLB mold, then fire it all in one firing, full fuse, and slump.

These molds were the most popular ones this season. You might remember them from my quilted plate article in the Spring 2021 issue of *Glass Patterns Quarterly*.

GPO

Petra Kaiser, internationally renowned kiln formed glass artist, teacher, and consultant for Wissmach Glass Co., has a distinctive style



that captures Florida sun, light, and water in sculptures, functional glassware, and wearable designs. She is drawn to 3-D sculptures and abstract shapes, and when first introduced to glass fusing in 1997, Petra found the available mold options limiting. This gave birth to Kaiser Lee Board, a perfect kiln forming medium developed by Petra and husband Wolfgang, that is easy to cut and form into any shape for fusing molds.

Petra loves to teach and shares her cutting-edge techniques and designs in her Fuse It Studio and all over the world. She has also shared her innovative ideas in three books from Wardell Publications and through numerous articles in various international glass magazines. To learn more about Petra's glass art and workshops, visit www.kaiserlee.com.

Statement of Ownership

(Required by 39 USC 3685)

1. Glass Patterns Quarterly 2. Publication Number 1041-6684 3 Filing Date: 4-20-2022, 4. Quarterly 5. 4 issues 6. 1 yr. \$28.00 7. 8300 Hidden Valley Road, Westport KY 40077, 8. 8300 Hidden Valley Rd., Westport KY 40077 9. (Publisher) Maureen James, PO Box 69, 8300 Hidden Valley Road, Westport, KY 40077. (Editor & Managing Editor) Editorial Board, PO Box 69, 8300 Hidden Valley Rd., Westport KY 40077, 10. Steven and Maureen James, PO Box 69, 8300 Hidden Valley Road, Westport, KY 40077 11. None 12. N/A, 13. Glass Patterns Quarterly, 14. Summer 2021, Fall 2021, Winter 2021, Spring 2022, 15. Extent and Nature of Circulation: Average Number of Copies Each Issue During Preceding 12 Months: 15A. Total no. of copies (net press run) 7125 15B(1): 5582 15B(2): 0 15B(3): 1124 15B(4): 0 15C: 6706 15D(1): 0 15D(2): 0 15D(3): 0 15D(4): 0 15E: 0 15F: 6706 15G: 419 15H: 7125 15I: 100% 15. Extent and nature of Circulation: Actual no. of copies of single issue published nearest filing date: 15A: Total no. of copies (net press run): 7200 15B(1): 5562 15B(2): 0 15B(3): 1075 15B(4): 0 15C: 6637 15D(1): 0 15D(2): 0 15D(3): 0 15D(4): 0 15E: 0 15F: 6637 15G: 563 15H: 7200 15I: 100% 16. Electronic Copy Circulation: Average No Copies Each issue During Previous 12 months: 16A: 190 16B: 6896 16C: 6896 16D: 100% 16. No Copies of Single Issue Published Nearest to Filing Date 16A: 176 16B: 6813 16C: 6813 16D: 100% 17. Publication of Statement of Ownership is required and will be printed in the Summer 2022 issue of this publication. 18. I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and or civil sanctions (including multiple damages and civil penalties), signed Maureen James, Publisher, Date: 4-20-2022.

Coldworking tools, equipment, and advice for improving your processes

IT'S TIME TO Upgrade

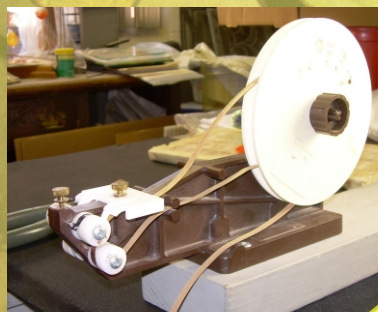
HIS GLASSWORKS

hisglassworks.com • support@hisglassworks.com • 800-914-7463

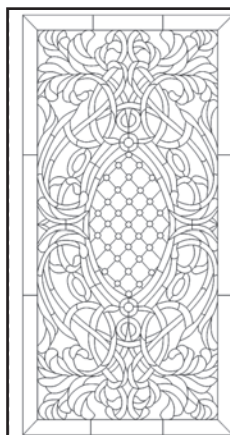
The perfect Gift!

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[®]



www.Hoevel.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

Paned Expressions Studios
Over 35 Years Design Experience

FAX: (410)-676-2112

Visit: www.panedexpressions.com

E-mail: SGPatterns@panedexpressions.com

Dragonfly Garden Stakes

Design, Fabrication, and Text by Lianna Bodzin

Photography by Lianna Bodzin and Brian Beamer



Dragonflies come in every combination of colors, and with their shimmering wings and flashing bodies, they engender admiration and fascination for many of us. I grew up in mosquito country, so in addition to loving the jewelry-box beauty of dragonflies, I considered them heroes for the fact that they are voracious eaters of the pests. When I started working with glass, I wanted to come up with a way to translate some of the lovely sheet glass I was finding into dragonfly decorations for the garden.

Since dragonflies come in almost endless combinations of colors and patterns and have varying body shapes, this project has loads of room for you to apply your own creative touches. Add stringers,

noodles, or frit to create patterns and sparkle. If your cutting skills are excellent—or if you have a ring saw—you can be extremely precise in your shapes. If you are less experienced at cutting glass and lack power tools, your project can still look lovely.

I've had dragonflies like these outdoors year-round in my garden in Colorado for years. They hold up well to the weather. They are, of course, glass and have a smallish connection where the wings meet the body. A strong hailstorm or a whack from a garden tool can knock a wing off. Barring accidents like that, however, if you do this 6" wide by 3-1/2" long project, you will have a lovely dragonfly that will float on the breeze.

Glass

Clear or Cathedral Glass for Top Wing Layers, 6" x 10"

Clear 1/4" Glass for Bottom Wing Layers, 6" x 10"

Opalescent Glass for Top Body Layer, 6" x 2"

Opalescent Glass in the Same or Complementary Color for Lower Body Layer, 6" x 2"

Stringers, Dichroic Pieces, Frit, or Fire Sticks for Decoration

Glass Dots for Eyes

Tools and Materials

Felt-Tipped Marker

24-Gauge High Temp Stamen Wire, 12-3/4"

3-1/2" x 4-1/2" Pieces of 1/8" Fiber Shelf Paper, 4

Preferred Kiln Adhesive

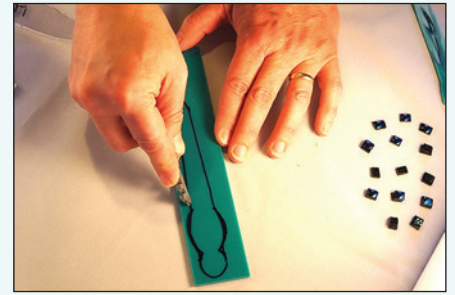
Indoor-Outdoor Clear Construction Adhesive,

Aquarium Silicone Adhesive, or Marine Adhesive

Aluminum Flat Bar, 1/8" x 1/2" x 3' or 1/8" x 3/4" x 3'

3

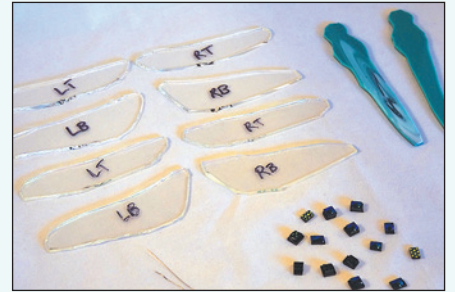
Cut out the glass pieces for the top and bottom body layers.



Cut one piece from the glass you selected as the top layer for the body. Depending on your cutting skills, you can make the neck narrower or thicker or even make almost no change in thickness between the thorax and head. Also cut one piece from the glass you selected as your bottom layer for the body.

4

Prepare the 24-gauge wire and glass dots for the eyes.

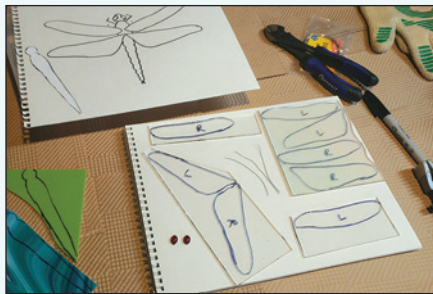


Cut the Glass

To begin, cut apart the pattern for the wing and body parts. Use the pattern pieces to trace the top and bottom body parts onto the colored glass and the wing parts onto the clear glasses. The full dragonfly pattern will help you later when it's time to assemble the dragonfly.

Cut one each of the wing pieces from the clear glass for the bottom layer and label the pieces.

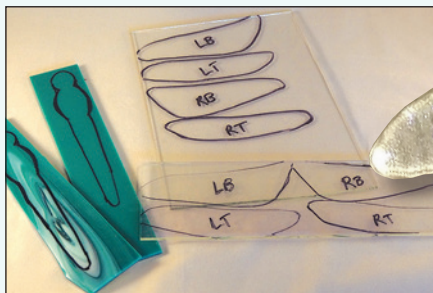
1



Labeling the wing pieces—LT for left top, RB for right bottom, for example—until you are ready to assemble the layers will help you avoid getting confused about which piece is which.

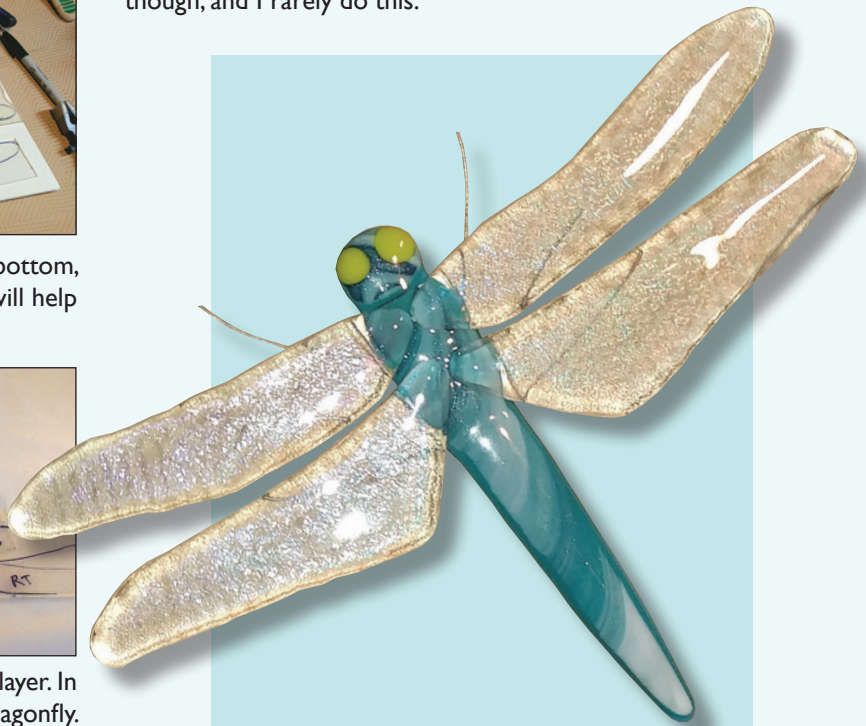
Cut one each of the wing pieces from the clear, iridescent, or cathedral glass for the top layer.

2



Label them as you did the clear pieces for the bottom layer. In these photos, I have used clear iridescent for the blue dragonfly. Iridescent glass works well, as do wispy or streaky types, as long as light can pass through the glass.

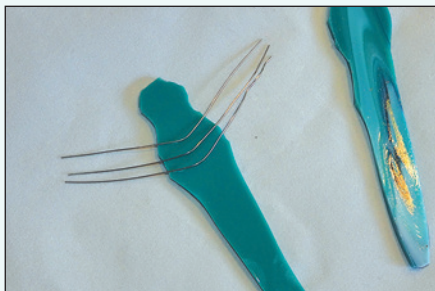
When using iridescent, I use it with the irid side down onto the clear. That way it will be protected from the elements by clear glass above and below if the dragonfly is outdoors.



Assembling for the Soft Fuse

Arrange the stamen wire pieces on the lower body piece.

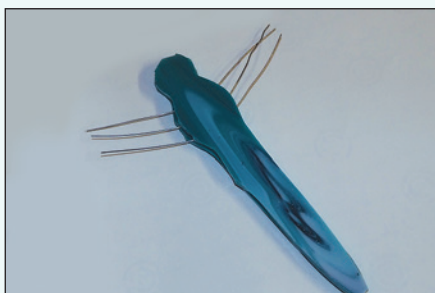
5



On your kiln shelf, lay out the lower body piece and set the three sections of stamen wire across the thick section of the body. These will be the insect's legs. Don't worry if they are exactly the same length for each piece and for each side of the body. As long as the layout is close, you can trim the lengths after fusing.

6

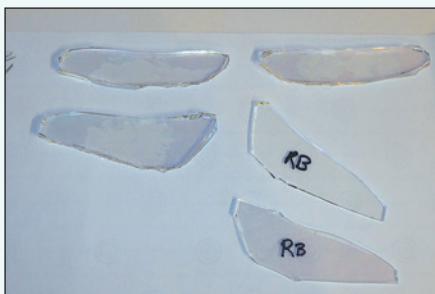
Apply adhesive to the body and wire pieces before placing the top body piece.



I prefer to use liquid hairspray in a needle-nose bottle for my adhesive. I put a few drops of hairspray along the body and a drop on the center of each piece of stamen wire. Then I lay the top body piece over the bottom piece.

7

Assemble each wing piece.

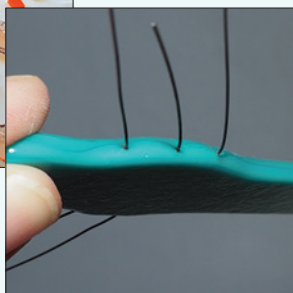


Clean off the label markings on each wing section as you set it up. Spread out the clear base layer pieces and top them with a drop of hairspray before topping them with the corresponding section of the cathedral or iridescent glass.



8

Arrange the glass pieces on the kiln shelf and fire to a soft fuse.



If you want to create dots, lay those out on the shelf as well. Place the shelf in the kiln and enter a soft fuse schedule. I have included the schedule that I use here, but my kiln tends to run a little hot. This schedule gives me rounded edges without the complete loss of definition that a full fuse would cause. You may need to experiment with your own kiln to get the results you want.

Soft Fuse Firing Schedule

Segment 1: Ramp 300°F/hr to 900°F and hold 15 min.

Segment 2: Ramp 500°F/hr to 1100°F and no hold.

Segment 3: Ramp 100°F/hr to 1250°F and hold 30 min.

Segment 4: Ramp 9999 (AFAP*) to 1415°F and hold 5 min.

Segment 5: Ramp 9999 (AFAP*) to 950°F and hold 45 min.

Segment 6: Ramp 100°F to 800°F and no hold.

Segment 7: Ramp 200°F/hr to 700°F and no hold.

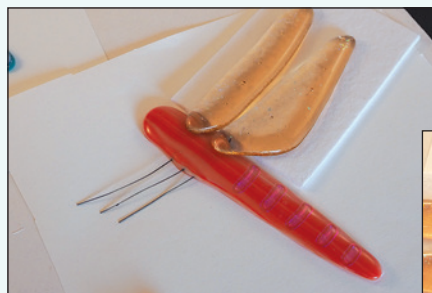
Segment 8: Ramp 400°F/hr to 100°F and OFF.

*as fast as possible

The fused bodies will have the legs embedded between the layers of glass. Once the soft-fused parts are cooled, you are ready to assemble the dragonfly.

Assembling for the Tack Fuse

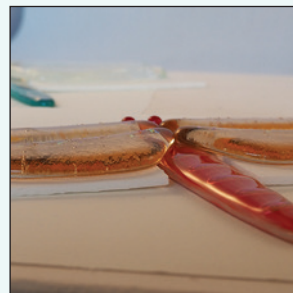
9



Assemble the bodies and wings.



Set out the bodies on the kiln shelf and set the rectangles of 1/8" fiber shelf paper up snugly to each side of the thickest part of the body and over top of the wire legs. Set the wings onto the body so that as much glass as possible is touching. The fiber paper will hold the wings up and straight as the glass tacks together in the kiln. You can use a bit of adhesive between the pieces, if you desire.



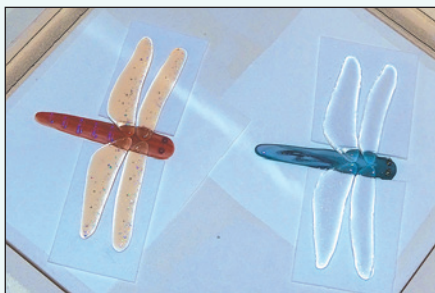
10

Using a drop of adhesive, set the dots in place for the eyes.



Place the shelf in the kiln and enter a conservative tack fuse schedule.

11



I have included the schedule I use, but remember that you may need to adjust it to fit your own kiln. ****Note:** These schedules anneal at 950°F, as recommended for COE 96. If you use Bullseye or other glass rated at COE 90 you should adjust that segment to 900°F.

You are tacking 4 layers at a very small point, so there is some risk of thermal shock and inadequate annealing if you use too aggressive a schedule. Ramping up slowly in Segment 1 helps to avoid thermal shock due to the varying thicknesses and the wings heating at a different rate than the body. The long anneal time in Segment 5 will help to avoid thermal shock in cooling the varied thicknesses and proximity to the shelf.

Tack Fuse Firing Schedule

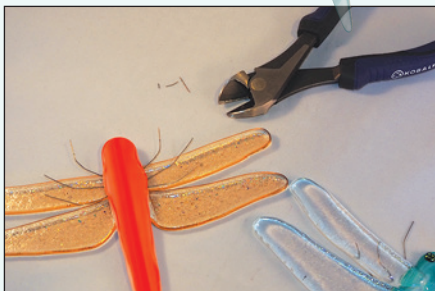
Segment 1: Ramp 75°F/hr to 900°F and hold 15 min.
 Segment 2: Ramp 500°F/hr to 1100°F and no hold.
 Segment 3: Ramp 200°F/hr to 1250°F and hold 30 min.
 Segment 4: Ramp 9999 (AFAP*) to 1330°F and hold 2 min.
 Segment 5: Ramp 9999 (AFAP*) to 950°F and hold 120 min.
 Segment 6: Ramp 50°F/hr to 800°F and no hold.
 Segment 7: Ramp 75°F/hr to 700°F and no hold.
 Segment 8: Ramp 200°F/hr to 100°F and OFF.

*as fast as possible

Final Assembly

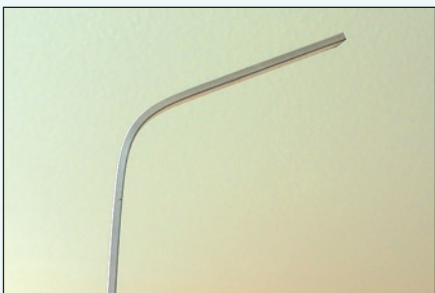
Trim the dragonfly legs so they are even, then put a slight bend in them to make them look more realistic.

12



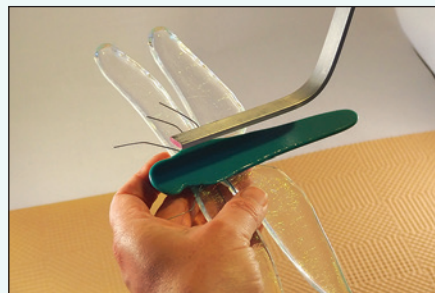
Bend the aluminum flat bar about 3" from the end to approximately a 45-degree angle.

13



Spread the indoor-outdoor silicone adhesive on the short end of the aluminum bar, following the adhesive instructions.

14



Don't spread the glue too thick, since you don't want to end up with a lot of drips.

Attach the dragonfly to the bar and ensure that it's stable and straight.

15



Set up the dragonfly on a table so that the bar won't shift until the adhesive is completely dry.

16



Set the short end of the bar on a papered work surface so it is sitting flat and the long end is angled away from the table. That way, it can dry without shifting. Leave plenty of time for the adhesive to set before moving your finished piece.

GPO

Early in life, Lianna Bodzin discovered a love of art and the play of light. She started making jewelry in high school, creating beaded necklaces with glass and semiprecious stones. Lianna moved to Colorado to study art and got her degree in film production.

After working in video production for a short time, Lianna moved into a technical career but could never go too long without doing creative work and became interested in fused glass. The gift of a tabletop kiln from the artist's mother and husband opened the door to a glass "addiction." She's been working with warm glass since 2012 and her projects and studio are taking over an increasing area of her house. Visit www.pretty-shiny-things.com and Instagram @prettyshinythings_by_lianna to view more of Lianna's glass art.



Fused Glass Flowers

Design, Fabrication, and Text by Mary Gerlick



One of the best things about summer is the arrival of beautiful flowers that appear in an endless array of shapes and colors. Creating these 5-1/2" fused glass flowers with their infinite possibilities will let you capture and enjoy that beauty not only during the summer but all year long. Let's get started.

Glass

Medium Frit in Desired Colors for First Disk Layer
Clear Medium Frit for Second Disk Layer

Tools and Materials

Shelf Paper Aloe Vera Gel
Round Slumping Mold Fiber Roll
3/32" x 36" Metal Rods Metal Hat
Vice (Optional) Green Spray Paint
#732 Dow Corning Clear Multi-Purpose Sealant
Green Silk Leaves Clear Tape

1

Trace a 5-1/2" circle onto the shelf paper and cut out the circle leaving a 1/2" outer edge around the circle.



Add a dab of aloe vera gel all around the paper so the frit will adhere to the paper.

2

Add the medium size colored frit to cover the entire circle.



You'll want to have a good 1/4" depth of frit.

3

Add a layer of clear medium frit on top of the colored frit, with another 1/4" depth.



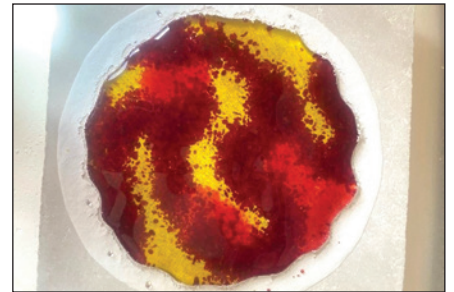
4

Use a spoon to push in the sides of the frit to make scalloped edges and create an organic edge.



5

Place the disk in the kiln and fire using the firing schedule below.



This is the schedule that works in my kiln when using 96 COE glass. Remember that each kiln is different, though, so you may need to make some adjustments for your own kiln.

Firing Schedule

Segment 1: Ramp 500°F/hr to 1050°F and hold 10 min.

Segment 2: Ramp 300°F/hr to 1400°F and hold 10 min.

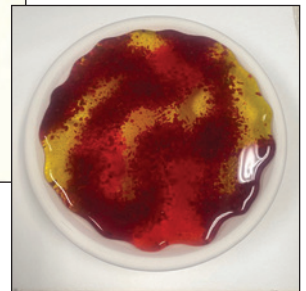
Segment 3: Ramp 9999 (AFAP*) to 950°F and hold 30 min.

*as fast as possible

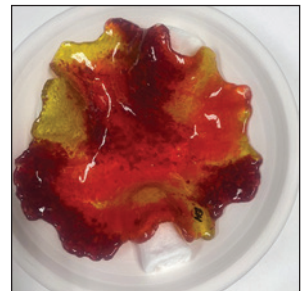
6



Add three pieces of rolled up fiber paper to the mold to slump the disk into an organic shape.



Take a fiber roll that's 1" wide, roll it up tightly, and secure it with clear tape. Place the rolls in three different places in the 6" round mold. I use Mini Me Molds by Bonnie Doon Fused Glass Supplies. These molds allow me to have a flat bottom on the back of the flower so the metal hat can adhere evenly.



I used the following firing schedule to slump the disk, but again, remember that you may need to make temperature adjustments to fit your own kiln.

Slump Firing Schedule

Segment 1: Ramp 250°F/hr to 1200°F and no hold.

Segment 2: Ramp 50°F/hr to 1240°F and hold 5 min.

Segment 3: Ramp 9999 (AFAP*) to 950°F and hold 30 min.

Segment 4: OFF.

*as fast as possible

7

Prepare the metal rod and hat shape.



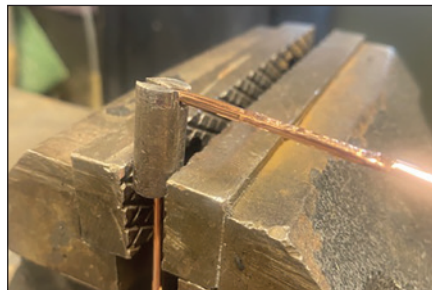
Cut the metal rod to the desired size. Mine are 18" long. Also punch a hole in the middle of the metal hat with a nail that is about the same size as the rod. The metal hat-shaped piece can be found at places that sell nuts and bolts. Check welding stores for the metal rod.

8

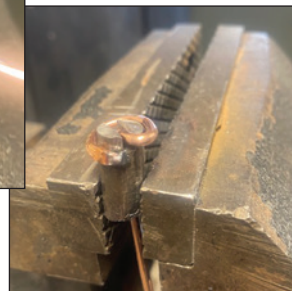
Place the metal rod in a vice and bend it to a 45-degree angle.



9



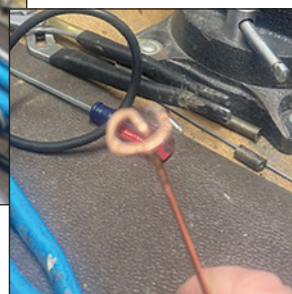
Twist the end of the rod to form a circle.



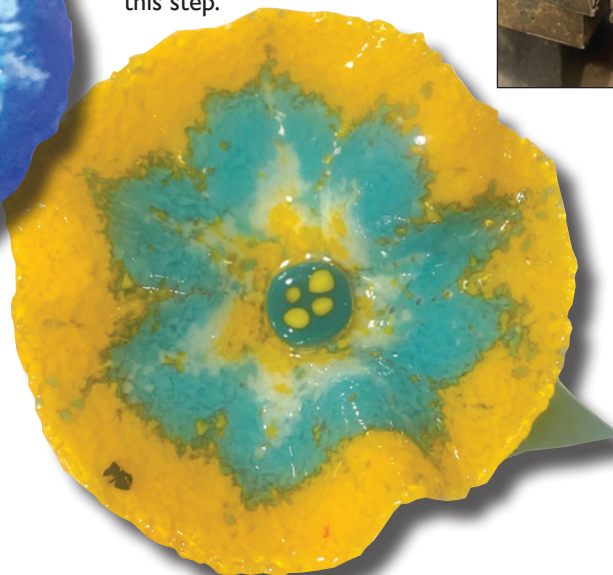
10



Insert the metal rod into the cap and hammer it in tightly.

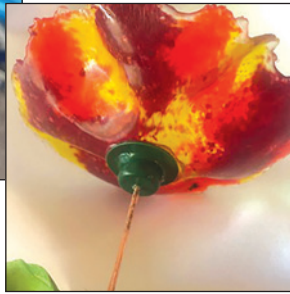


The straight rod is inserted into the hole in the metal hat so that the twisted end fits into the hat. I use a hammer and make sure that the metal rod is snug inside the hat. Using a vice is helpful for this step.





11



Spray paint the metal hat green and use the clear sealant to glue the hat to the bottom center of the flower.

To finish, glue a 1" full-fused circle to the inside of the flower, then add some green silk leaves to the stem. Your flower is now complete. I hope you enjoy making these fused glass flowers that have so many options and are easy to make!

GPQ



Mary Gerlick's exposure to glass fusing started in 2006 when she visited her parents' birthplace in Cefalu, Sicily, where a shopkeeper was kind enough to share her love for the medium of glass art with Mary. Upon returning back to her home in Bakersfield, California, she found a wonderful local glass shop and store owner, Peggy @ Gargoyle, who allowed her to begin her personal journey in fused glass. After graduating from an 8" Evenheat kiln to a 14" Olympic kiln, she now has a 26" kiln that allows her to create larger custom-made pieces ranging from platters and bowls to wall art.



Mary is self-taught, which she believes is possible thanks in part to trade publications such as Glass Patterns Quarterly® and many skilled glass artists on social media fused glass platforms who pay it forward and share techniques, schedules, and inspirations. The artist sends a heartfelt thanks to Laurie Spray, Stephanie Kay O'Toole, and Jim Matthews for their expertise and generous sharing of knowledge and assistance. Visit www.glassworkbymary.com and Instagram @glassworkbymary to view more of her glass art.

© Copyright 2022 by Glass Patterns Quarterly®.
All rights reserved.

Sanders



\$925.00
Deluxe Commercial
Wet Belt Sander



Covington

520 E. Franklin Rd.
Meridian, ID 83642

877.793.6636
admin@covington-engineering.com
www.covington-engineering.com



SilkeMat®

non-carcinogenic fiber blanket

...the **safe** choice for reusable soft and rigid molds



Fanny Finchelman

Michelle Michi Bohannon



Lydia Piper

What will **YOU**
create today?

www.SilkeMat.com
www.bjcashman.com
Facebook:

"SilkeMat Tips & Techniques"
sales@SilkeMat.com

SilkeMat®

Kiln Corner

Protecting an Outdoor Kiln from Weather

by Arnold Howard

Photos Courtesy of Arnold Howard

I often see kilns in backyard sheds and under covered porches. Some of the kilns are rusted and dusty, while others still look new. If you keep a kiln outside, a backyard storage shed is ideal for protecting your kiln.



This is a typical backyard pottery or glass studio, about 16'x 20'. They can be seen all over Texas, including on remote ranches.



This is a university studio where the kilns are protected by walls from three sides with one side open. Because the kilns are protected from crosswinds, they remain in excellent condition.

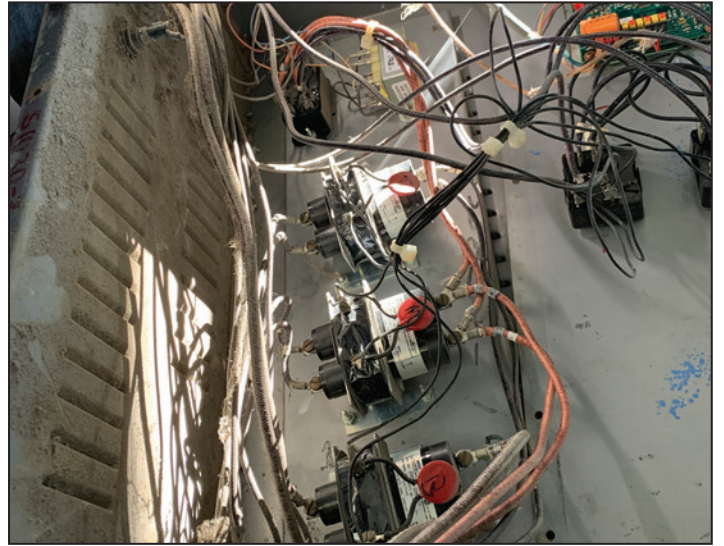


This backyard studio is attached to the house. It has a roof and three walls, so the kiln is fully protected from the weather.



I worked on a kiln recently that was on a small back porch. The kiln was close to the edge of the roof overhang, so it was unprotected from the weather and badly rusted. The ceramic fiber was damp enough to carry a mild electric current when the elements were turned on. If you protect a kiln like this one with a sheet of plastic, air the kiln out often to prevent moisture from building up inside the plastic.

GPO



Backyard Storage Sheds

I see storage sheds all over Texas, from two-story barns to small studios. The shed is ideal because it has four walls and a roof, so the kiln is protected from rain, wind, and excessive condensation.

The floor should be concrete. Do not place the kiln directly on the floor. Use the stand that came with it or an equivalent substitute. The stand must allow air to circulate under the kiln, and it must separate the kiln by a safe distance from the floor. The stand must be rock-steady to prevent delicate glass designs from shifting.

Porches and Carports

The next step down from a backyard shed is a covered porch or carport protected with three walls. The fourth side is open, but the walls prevent wind from blowing across the kiln. Some universities fire their kilns in this type of building. Those kilns look as good as kilns that are kept in a fully enclosed studio.

Covered porches or carports that have open sides offer less protection from weather than the ones with three walls, because the wind blows across the kilns carrying dust and moisture. The dust is difficult to remove, because it embeds into the paint.

Dust also deteriorates the switch boxes, because it acts as an insulator on the wires and components, causing everything to get hotter. The moisture in the wind rusts the kiln, and the doors of front-loading kilns become difficult to open. An open carport or porch may offer more protection, however, if the walled side is toward the prevailing winds.

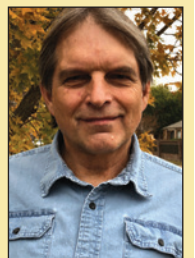
Additional Protection for Outdoor Kilns

If your kiln is on a covered porch or under an open carport, try to protect the kiln by adding another wall. If that's not feasible, move the kiln inward from the edge of the roof. A kiln that is near the edge of a porch or patio becomes rusted on the side that faces outward. Though the kiln will seem protected from the weather, wind can blow mist onto it.



This kiln is protected by a large roof but the studio is open on three sides. That makes it possible for the wind to blow freely across the kiln. The dust is embedded into the paint and difficult to clean off. If you have a studio like this one, clean off the dust every week with a moist rag.

While Arnold worked at Paragon Industries, he saw kiln controls evolve from switches to touch screen displays, tested early glass kilns, and wrote instruction manuals. In September 2019, Arnold started Howard Kilns, LLC, a repair and preventive maintenance business, to serve the Dallas-San Antonio, Texas, area and works on all brands of kilns. Feel free to contact him at arnoldhoward@gmail.com or call/text 972-333-1437.



© Copyright 2022 by Glass Patterns Quarterly®. All rights reserved.

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

334 Hope Street
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

Susie's 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 I-9
West Palm Beach, FL 32935
561-557-7713 / 844-SGF-LESS
www.stainedglassforless.com

ILLINOIS

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.treehouseglassstudio.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

BC Art Glass Studio

1361 Providence Rd
Whitinsville, MA 01588
www.bcartglass.com

Toy Town Stained Glass

36 Monomonac Rd W
Winchendon MA 01475
978-297-7102
tacachance@comcast.net
www.toytownstainedglass.com

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

Stallings Stained Glass

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

MINNESOTA

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

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

NORTH CAROLINA

Mystical Reflections Stained Glass

225 Koolabrew NW
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

OKLAHOMA

PeaceLuvGlass

507 S East Drive
Fletcher, OK 73541
580-678-4063
www.peaceluvglass.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 Eckhert 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

Northwest Garden Bling

44574 SR 20
Concrete, Washington 98237
360-708-3279
www.facebook.com/northwestgardenbling

WISCONSIN

The Glass Garden LLC

25 W Milwaukee St
Janesville, WI 53548
608-754-3718
www.eglassgarden.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

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



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.

**Live Two-Hour, Interactive Web Workshops
with Renowned Glass Artists
Link to Class Recording Never Expires!**

Making Waterslide Decals ▶

with Scott Ouder Kirk
May 24



Marketing for Artists ▶

Lecture with Joseph Cavalieri
May 26



Coldworking ▶

with Dennis Brady
May 31



Creative Slumping ▶

with Lisa Vogt
June 2



Underwater Gardens ▶ New

with Dennis Brady
June 7 and June 9



Tale of Two Techniques ▶

with Joe Porcelli
June 16



Inside Out Flow Vessel ▶

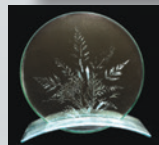
with Nathan Sandberg
June 21



Float Glass

with Enamels and Metals ▶

Lecture with Richard La Londe
June 23



Wee Webinar™ Ghost Foliage ▶

with Dennis Brady
July 12



The Art of Ice Glass Tiles ▶

with Rick Silas
July 21



Sticks and Stones ▶

with Cathy Claycomb
July 26

**Visit the Glass Expert Webinars® link under
“What’s New” at www.GlassArtMagazine.com
for more details and local times.**

Advertisers' Index

Advertiser	Contact Info	Page
Aanraku	(650) 372-0527 www.Aanraku.com	5
Angel Companions	(360) 385-3457 www.AngelsGlassArt.com	31
Anything in Stained Glass	(800) 462-1209 www.AnythinginStainedGlass.com	29
Armour Products	(973) 427-8787 www.ArmourProducts.com	31
Bob Leatherbarrow	www.LeatherbarrowGlass.com	60
Brooklyn Hardware, LLC	(888) 232-1151 www.PanelClip.com	27
Covington Engineering Corp.	(877) 793-6636 www.Covington-Engineering.com	73
Creators Stained Glass	(847) 477-3863 www.CreatorsBrand.com	21
Cress Manufacturing	(800) 423-4584 www.CressMfg.com	79
Delphi Glass	(800) 248-2048 www.DelphiGlass.com	17
Edco Supply Corporation	(866) 397-4777 EdcoFloridaWest@aol.com	53
Foil Revolution, LLC	www.FoilRevolution.com	52
Franklin Art Glass	(614) 221-2972 www.FranklinArtGlass.com	21
Gemini Saw Company, Inc.	(310) 891-0288 www.GeminiSaw.com	21
GlasDesign Patterns	www.Etsy.com/Shop/GlasDesignPatterns	31
GLASHAUS	www.GlassHouse.de	56
Glass Accessories International	www.GlassAccessories.com	61
Glass Art®	(502) 222-5631 www.GlassArtMagazine.com	53
Glass Expert Webinars®	(502) 222-5631 www.GlassPatterns.com	31/78
Gryphon Corporation	(818) 890-7770 www.GryphonCorp.com	9
Handy Hanger®	(979) 864-0556 www.HandyHanger.net	8
His Glassworks, Inc.	(828) 254-2559 www.HisGlassworks.com	65
Hoevel	www.Hoevel.com	65
ISGB	(614) 222-2559 www.ISGB.org	60
KWC, LLC Table Foiler	(800) 250-1790 www.TableFoiler.com	29
Mark Lauckner	www.Patreon.com/MarkLauckner	56
Morton Glass Works	(309) 266-5712 www.MortonGlass.com	61
Paned Expressions Studios	(410) 676-1248 www.PanedExpressions.com	61/65
Paul Wissmach Glass Co., Inc.	(304) 337-2253 www.WissmachGlass.com	80
SGAA	(800) 438-9581 www.StainedGlass.org	52
SilkeMat™	(336) 580-7063 www.SilkeMat.com	73
Skutt Kilns	(503) 774-6000 www.Skutt.com	2
Sunshine Glassworks Ltd.	(800) 828-7159 www.SunshineGlass.com	53
Whittemore-Durgin	(800) 262-1790 www.WhittemoreDurgin.com	61
Youghiogheny Opalescent Glass Company	www.YoughioghenyGlass.com	27

An Innovation to the Cress line of Glass Kilns

Our GK Series Drop Bottom Kilns



Jan Goldress

Of the nine kilns I own My GK Cress kilns are by far my most favorite. They are the most amazing kilns I own. There is no question that the GK1, GK2, and GK3 are the safest combining kilns on the market. Additionally they slump bowls perfectly! You'll never have a lopsided bowl again. These kilns are fabulous for doing jewelry or small pieces because you do not have to work around a thermal coupler and tip your tray as you're trying to load the kiln. The drop bottom makes it so easy to slide your full tray of composed pieces of glass right into the kiln, lift, close it and then fire. The size also makes it perfect for doing general fused pieces that you want to slump later, as well as pot melts. The GK1 and 2 are also excellent choice when doing vitriograph, murrinni, and twisted cane rods. I love the GK3 tall edition for doing perfect castings too!

- Designed for easy and safe manipulation of hot glass
- Minimal heat loss and fast temperature recovery for virtually any firing project
- Firebrick brick top and sides with heating elements for even heat distribution
- Comes standard with the user-friendly Bartlett 3 key digital controller
- Cress digital controller has room for 4 programs with 8 segments
- Superior riveted steel bottom with fiber floor drops down easily with four guided tracks on a solid counterbalanced base
- Long-lasting solid-state relays

Model	Volts	Amps	Max Temp	Chamber Opening	Outside Dimensions	Fuse Size	Ship Weight
G K1	120	15	2000°	8"x8"x6.75" H	15.5"x14.5"x17.5" H	20	70
GK2	240/208	18/16	2000°	12"x12"x9" H	25"x25"x39" H	20	180



Cress Mfg. Co., Inc. 4736 Convair Dr. Carson City, NV 89706
 Phone (775) 884-2777 Fax (775) 884-2991 Website www.cressmfg.com
 Email info@cressmfg.com



Karen Schoen

Are You a Proud User of Wissmach Glass?

Thank you to all participants for sending in your images. If you don't see yours, it might be in one of our upcoming showcases.

You too can participate in this "Friends of Wissmach Glass" artwork showcase.

Please visit wissmachglass.com and search in our blog for "How to participate in showcase?".



Grace
McDonald

Paul Wissmach Glass Co.

420 Stephen St.

Paden City, WV 26159 - USA

Telephone: (304) 337-2253

Fax: (304) 337-8800

sales@wissmachglass.com

www.wissmachglass.com



Donna
Lesondak