

# GLASS PATTERNS

— Q U A R T E R L Y —

Summer 2016

Volume 32 • No. 2

## Slice of Summer

Stained Glass

**Jeweled Dragonfly**

**Tiny Tiffany**

**Enamel Painting**

Fused Glass

**Coasters &  
Wine Charms**

**Wisteria Bowl**

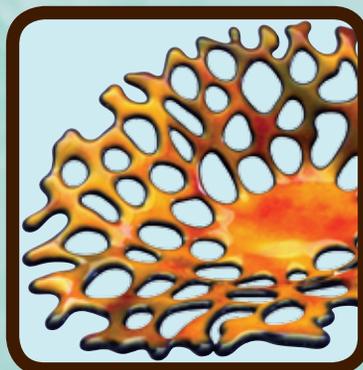
**Garden Turtles**

**Sunset Coral**

**Golden Koi**

Etching

**Tiki Mosaic Table**



Volume 32 No. 2

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## From the Editor

### Slice of Ingenuity

I recently attended the Glass Craft & Bead (GC&B) Expo in Las Vegas, Nevada, where the show floor was buzzing with excitement from attendees learning the latest techniques and voicing respect for those teaching them. That excitement continues with a wide array of expertise packed into this Summer 2016 edition of *Glass Patterns Quarterly*. I'm always amazed at the amount of colors, patterns, and assistance in each issue gathered from contributing artists spanning three continents. This "Slice of Summer" issue does not disappoint. Let's take a look.



On the stained glass side, as in every issue, *GPQ* Summer 2016 touches on craftsmanship for foiling, burnishing, and soldering stained glass projects. Our experts will also show you ways to form both a round and rectangular jig, how to frame with lead, include bevels in your designs, enhance projects with decorative wire, and work with opaque, enamel, matte, and kiln fired paints. When you're finished constructing your piece, you'll learn ways to clean it and make it shine. There are also beautiful details and color selections to be found in our stand-alone patterns featuring a lighthouse, summer peaches, Scottish thistle, and Action Bevel designs.

Artistry using mixed media, which was all the rage at the Expo, is also included. Combining mediums can lead to the creation of an intriguing work of art, and this issue is brimming with suggestions on merging warm and cold glass tactics such as combining traditional methods with fused mosaic tesserae. Skills are demonstrated for enriching your glass designs with etching, rubber stamping, embossing, and decorative grout, as well as for stained glass and fused mosaics, including the use of *andamento*. You'll also find tips for the best ways to handle tile adhesive and apply paint markers and ready-to-use enamels.

This year the GC&B Expo *Gallery of Excellence* displayed some stiff competition, especially in the Fused Glass division, where our publisher Maureen James, Webinar Producer Marcie Davis, and I were judges. These glass artisans have raised the bar when it comes to fusing, which is evident in the fused glass tutorials that are an important part of each *GPQ* issue. Check out the instructions on painting with glass powder and creating designs with mosaic-size pieces and vitrigraph stringer. Tips on three-dimensional fusing, working with dichroics, using the provided firing schedules plus advice on adjusting them to fit your own kiln, and so much more are waiting for you inside these pages.

Infuse your summer with a fresh slice of glassmaking skills topped with a piece of ingenuity to upgrade your work. It all begins here. Don't be afraid to experiment, transform, and create!

Happy Glassing,

*Delynn Ellis*

Delynn Ellis

Managing Editor

Glistening Garden Pals  
by Lisa Vogt



#### Upcoming Submission Deadlines

<b>Fall 2016</b>	<b>Autumn, Halloween, Christmas, and Holiday Ornaments</b>
Editorial	June 20, 2016
Ad Closing	July 20, 2016
Ad Materials	July 30, 2016

<b>Winter 2016</b>	<b>Wildlife, Winter, and Landscapes</b>
Editorial	September 20, 2016
Ad Closing	October 20, 2016
Ad Materials	October 30, 2016

- 3 From the Editor  
Slice of Ingenuity  
by *Delynn Ellis*
- 6 Jeweled Dragonfly Suncatcher  
An Introduction to Stained Glass  
Design by *Lidia K. Anderson*
- 10 Snail and Coneflower  
Design by *Chantal Paré*
- 16 Peaches  
Design by *David Lance Goines*
- 18 Tiny Tiffany  
Design by *David Kennedy*
- 22 Sunset Coral Bowl  
Design by *Kathy Griffiths*
- 26 Glistening Garden Pals  
Design by *Lisa Vogt*
- 30 Scottish Thistle  
Design by *Denise Rogers*
- 32 Mariner's Guardian  
Design by *Kevin Thornhill*
- 33–48 16-Page Full-Size Pattern Section
- 50 A Day at the Beach . . . in Glass!  
Design by *Erica Biery Collins*
- 53 What's New
- 56 Mad Etching Skills  
Jungle Tiki Etched Mosaic Table  
Design by *Carmen Flores Tanis*
- 62 Golden Koi  
Fused Glass Mosaic with Depth  
Design by *Wesley R. Wong*
- 70 Wisteria Bowl  
Design by *Kelley Mc Hugh*
- 74 Stained Glass Supply Shops
- 77 Splendor in the Utopian World  
Design by *Randolph Raum*
- 78 Advertisers' Index



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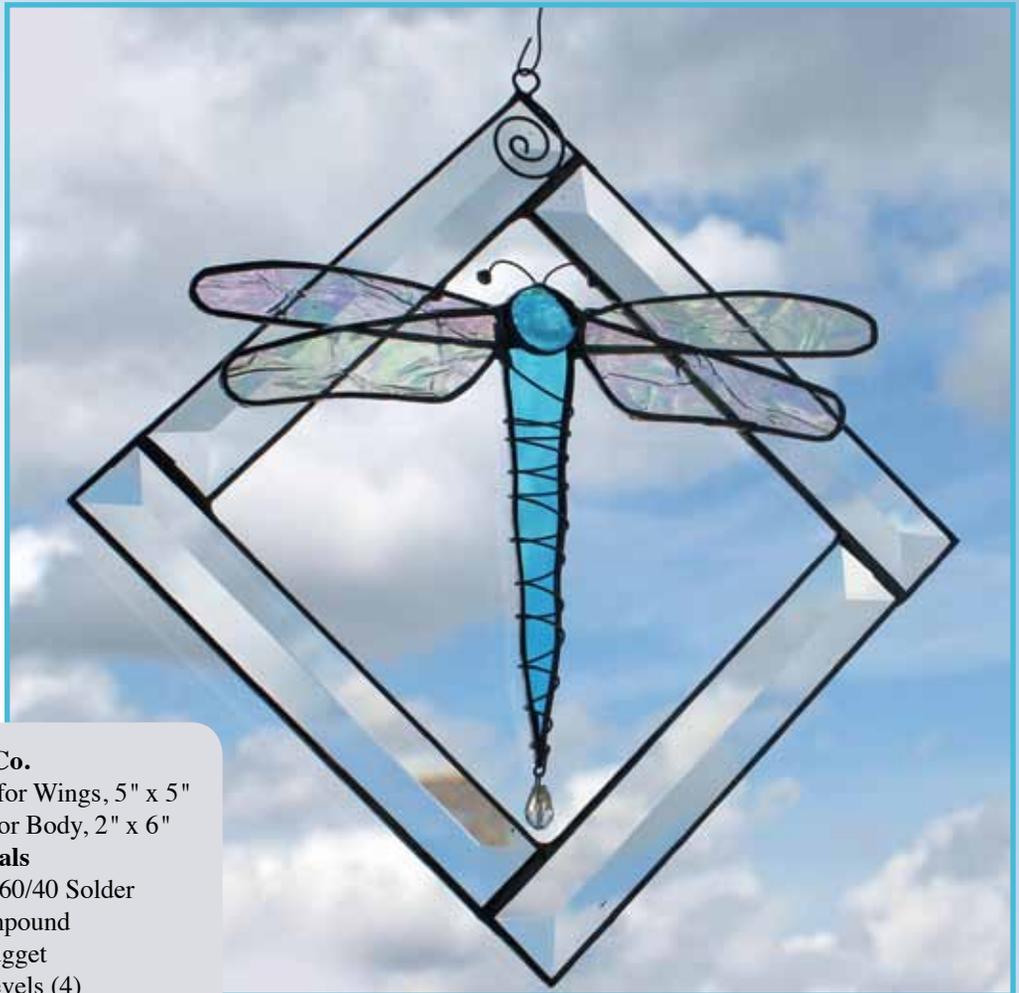


# Jeweled Dragonfly Suncatcher

## An Introduction to Stained Glass

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

In the summertime when I was about 3 or 4 years old, my mother would take me to a nearby pond where we would paint pictures together. I remember being mesmerized by the beautiful and delicate dragonflies with their jewellike wings, skipping over the water and wishing I could fly like that, too. They looked so magical. These glass dragonflies make me think of those wonderful times and the happiness they brought me. Enjoy!



### **Spectrum Glass Co.**

I/100K, Iridescent Clear Krinkle for Wings, 5" x 5"  
533-1W, Sky Blue Waterglass for Body, 2" x 6"

### **Tools and Materials**

7/32" Silver-Backed Foil 60/40 Solder  
Flux Polishing Compound  
1/2" Clear Glass Nugget  
1" x 6" Clear Pencil Bevels (4)  
20-Gauge Tinned Copper Wire, 20"  
Teardrop Crystal Clear Bead (4 mm x 6 mm)  
Temperature-Controlled Soldering Iron  
Safety Glasses Marking Pen  
Rubbing Alcohol Needle Nose Pliers

**1**

*Foil and burnish the 4 bevels and arrange the pieces in a square configuration inside a carpenter's square to help keep the bevels straight.*



**2**

*Add a decorative wire hanging loop to one corner.*



Turn down the temperature slightly on the soldering iron and bead all of the seams plus the outside and inside edges. Flux over the foil and solder the pieces together.

Using a pair of needle nose pliers and a 4" length of the tinned 20-gauge tinned copper wire, create a curled loop and solder it to one corner of the beveled square frame. Wash, dry, and set aside.

3  
Cut out the pattern pieces for the body and wings, then trace them onto the glass.



Trace one body piece on the Sky Blue Waterglass plus one set of wings on the Iridescent Clear Krinkle, then reverse the wing patterns and trace the other set of wings.

4  
Prepare the glass pieces and the clear glass nugget.



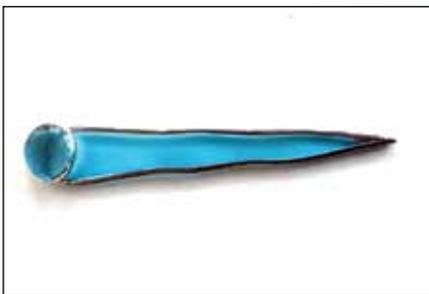
Cut, bevel-grind, clean, and dry the glass pieces and the clear glass nugget. Grind the nugget flat around the edge. Foil and burnish the wings, body, and nugget.

5  
Flux and solder the wings, bead the edges, and overlap the bottom wing on the top wing.



Solder at the points where the wings meet to secure the glass pieces in place.

6  
Place the glass nugget over the top of the dragonfly body, then solder the edges to secure the nugget in place.



7  
Create the antennae.

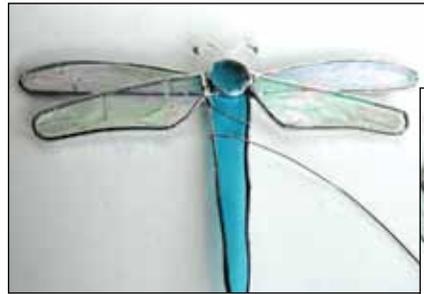


Cut approximately 1-1/2" of the wire, bend it in half with needle nose pliers, and flux the ends. Slowly drop solder down the wire to form small solder balls for the antennae knobs.

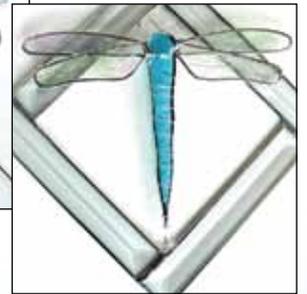
8  
Assemble the dragonfly.



Solder the wings to both sides of the body, then solder the antennae to the nugget head and curve the wire.



9  
Wrap tinned copper wire around the dragonfly body.



Solder one end of the long piece of 20-gauge tinned copper wire at the point where the bottom of the left wing meets the left side of the body and start wrapping the wire clockwise around the body of the dragonfly. Continue wrapping the wire until you get about 1/2" past the tip of the tail.

Loop a ring with needle nose pliers and solder it to the end of the tail. Attach the teardrop crystal bead to the ring. Clean the joints with a little rubbing alcohol and wipe dry.



# Armour Products

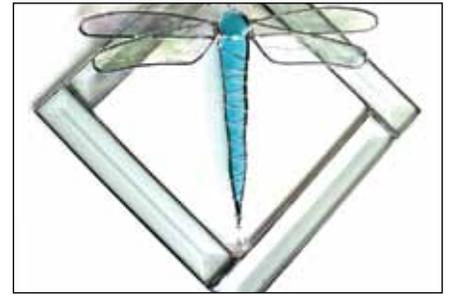
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10

Position the dragonfly on the bevel frame so that the teardrop bead clears the frame slightly.



11

Attach the dragonfly to the frame.



Press down slightly on the dragonfly body so that it bends a little and tack-solder the points where the top wing touches the inside of the frame. Press on the body again so that the bottom wing touches the inside frame and tack-solder those points on both sides. Now clean and polish the piece, and it is ready to hang. **GPO**

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

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

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

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## Ring



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## Pendant (without chain)



AANP-11

## Earrings



AANP-12

## Extra Disks

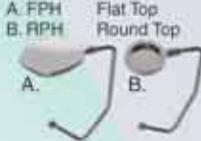


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## TEA SERVER



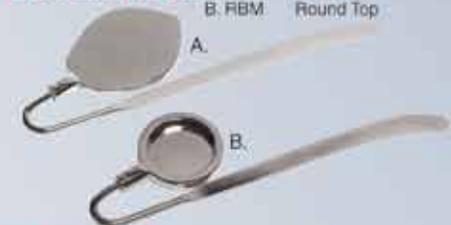
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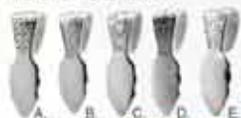
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# Snail and Coneflower

*Design, Fabrication, and Text by Chantal Paré*

*“Rain is grace; rain is the sky descending to the earth. Without rain, there would be no life.” – John Updike*

Did you know that many common species of terrestrial snails kiss, dance, and shoot darts like Cupid before mating, and that they lay eggs from the side of their heads? These squishy, slimy, gentle creatures with their bizarre body plan and extendable eye stalks spend quite a bit of time grooming and polishing their colorful shells. They are fascinating to observe, make easy pets, and are sure to bring children and adults alike a greater appreciation of our natural world.

This small-scale 7-3/4" x 13-3/4" project, in the style of a whimsical children's illustration, will allow you to explore the vast choices of glass paints that are available and makes use of both opaque colors and enamels. The dominant color is a blue/purple, which is highlighted by the complementary yellow-green. The latter is created by painting green matte and enamels on pure yellow glass.

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1059 Stencil Black, 1 Tablespoon

**Mattes**

RP1139 Umber Brown Hancock's

RP7852MB Strong Blue

7870MB Dark Green

1 teaspoon for each color

**Enamels**

RPD26169 Green 0541

RD25822 Chartreuse

21877 Violet

1 teaspoon for each color

**Tools and Materials**

5/16" U-Channel Zinc Came

60/40 Solder Float Glass

Liner Paintbrush Badger Brush

3/16" Black-Backed Copper Foil

14-Gauge Pretinned Copper Wire

Powdered Laundry Detergent

Gum Arabic Painting Knife

Craft Stamps Propylene Glycol

Light Box Kiln Masking or Electrical Tape

Soldering Flux Came Miter Saw

Calcium Carbonate (Whiting)

1



Prepare the pattern.

Print two copies of the pattern. The first is cut apart to use as a template for individual glass pieces. The second is used as a full template when soldering all the pieces together.

2



Trace the paper pieces onto the glass, score just inside the marked lines, and break until all the pieces are cut.

3



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

4



Clean the glass.

Daub some whiting on a moist rag and scrub until the glass whistles as you rub, then soak the glass in about 5 cups of warm water with 1/2 teaspoon of powdered laundry detergent for 20 minutes. Scrub again, rinse, and wipe dry.

NOTE: This step is crucial. Otherwise the paint won't stick to many areas of the glass and it's infuriating! Industrial residue on glass is the scourge of glass painters.

5



Prepare the glass paint on a piece of float glass.

Sprinkle 1 teaspoon of Stencil Black paint powder with a tiny amount of gum arabic and some water, mixing with a painting knife until you reach the viscosity of heavy cream.

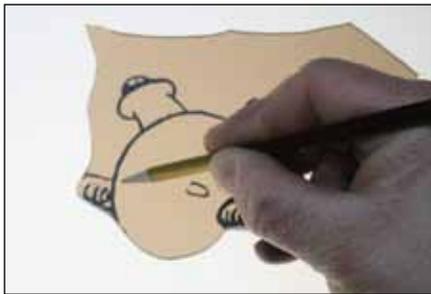
6



Against backlighting, trace the black outlines on the pattern with the Stencil Black paint using a liner brush.

Let the paint dry and scrape off any unwanted irregularities with a wooden fid or a paintbrush with its distal end made into a point with a pencil sharpener.

7



Carefully place the glass in the kiln on primed shelves and fire to set the paint.

8



I use the firing schedule below for every step, but remember that each kiln fires differently. You may need to make some adjustments to the schedule to work with your particular kiln.

#### Firing Schedule

- Segment 1: Ramp 550°F/hr to 900°F and hold 5 min.
  - Segment 2: Ramp 9999 (AFAP\*) to 1080°F and hold 10 min.
  - Segment 3: Ramp 50°F/hr to 986°F and no hold.
  - Segment 4: Ramp 9999 (AFAP\*) to 950°F and no hold.
- \*as fast as possible

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

9

Prepare and apply the matte colors to the pieces.



Use Stencil Black for the soil, Strong Blue for the flower petals, Umber Brown Hancock's for the snail's body, and Dark Green for the flower center and the snail shell. Make a separate suspension of each matte color and a sprinkle of gum arabic with water to a milky consistency and brush a coat on the pieces. Before the coat dries, even it out by stippling with a badger brush or natural sponge and allow the paint to dry.

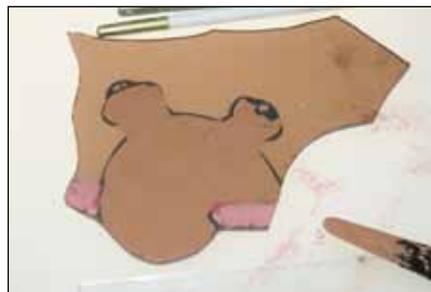
Remove some of the matte by tapping with a blunt, stiff brush to create brighter areas, leaving only shading.

10



Repeat steps 9 and 10, this time with the enamels.

11



Stripes of violet can be painted directly onto the flower petals. A matte can be made on the flower center and snail shell with the green, and the soil and snail body can be made with the chartreuse.

12

Decorate the background.



Mix the enamels with a solution of 60% propylene glycol and 40% water and spread on float glass with a brush. Pick up the color with a craft stamp and apply onto the project background, then fire again using the schedule above.

13

Foil all of the pieces.



Square up the panel and cut the U-channel zinc that will be used for the frame after soldering.

14



# "Flight into Fantasy"

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

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Photo: Ed Pollard

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Prepare a jig using a carpenter's square to ensure perfect corner angles. Using a miter saw, cut out a frame from the 5/16" U-channel zinc came.

15

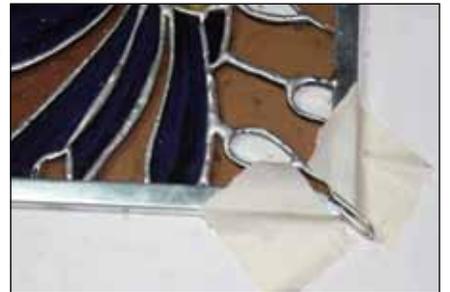
Solder both sides of the panel.



Brush small areas with flux and solder the first side. Remove the panel from the jig, repeat on the second side, place the zinc frame around the piece, and solder to the lead lines that make contact with it.

16

Nestle bent pieces of the pretinned copper wire inside the top joints to serve as hooks.



Use masking tape as solder resist to make sure the solder doesn't spread onto the zinc frame.

17

Throw a fistful of whiting onto the panel and brush vigorously with a burnishing brush, then clean with soap and water.



Do not add patina, since it will damage the paint. **GPO**

*A decade ago, Chantal Paré quit the fast-paced world of molecular biology to devote herself to the full-time pursuit of glass. She's liable to melt it, blow it, break it, paint it, or cast it, sometimes just to show it who's boss. Nothing else comes close to creating an object through which light can pass the same way it does through water. In her free time, Chantal draws patterns in a variety of styles ranging from Victorian to geometric and self-publishes them on the Internet. Lately, she's concentrating her efforts on glass painting.*



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# Peaches

Design by David Lance Goines, Text by Darlene Welch

Nothing in the world beats a summer trip to the local you-pick farms, especially the ones where the wagons are headed for the peach groves. The wonderful fragrance of ripe peaches fills the air, and those picking these luscious, golden beauties can hardly wait to experience the taste of that first juicy bite.

This 18" x 24" stained glass panel from *Aanraku Eclectic XI from the Original Collection Volume II* by Hiroyuki Kobayashi and Jeffrey Castline of Aanraku Stained Glass is a perfect way to capture that summertime memory. The book features 26 designs from Aanraku students that include patterns for boats, fish, a jungle scene, a mermaid, flowers, fruit, and more. The first rendering of this design by Andre Sobieski is based on the original design by Aanraku student, David Lance Goines. All of the projects in the collection are shown in color. Visit [www.abasg.com](http://www.abasg.com) for the complete collection of stunning books plus many other great offerings from Aanraku Glass Studios.

**GPO**



## Wissmach Glass Company

188-L Gray Blue/White Opal for Background, 4. Sq. Ft.

145-D Dark Amber/Opal/Crystal for Peaches, 2. Sq. Ft.

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

155-LL Dark Purple/Green/Light Opal/Crystal for Branches, 1 Sq. Ft.

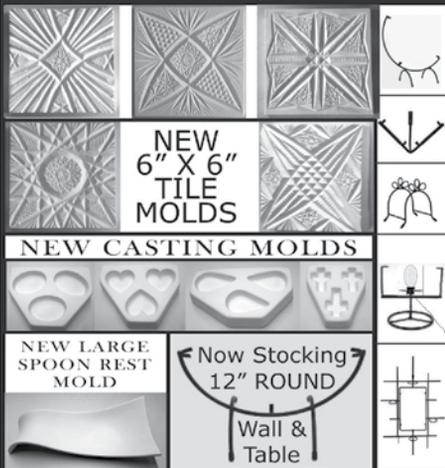
36-L Opal/Salmon for Branch Buds, Scrap

## Tools and Materials

7/32" Copper Foil Flux Solder  
Black Patina 1/2" U-Channel Zinc

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# Tiny Tiffany

Design, Fabrication, and Text by David Kennedy



Photography by Sharon Kennedy

There is no shortage of poppies in the work of Louis Comfort Tiffany. He used them to depict the vibrant colors of summer in his famous *Four Seasons* panel. He also wove poppies into lamp shades and vases, as well as the foreground of detailed, plated windows. You don't have to make a life-size design, however, to enjoy the inspiration of Tiffany's eye for flow and color. By reducing the composition and simplifying the design, you can make this *Tiny Tiffany*.

#### Uroboros Glass Studio

65-540 or 00-40 for Sky, 1/2 Sq. Ft.

65-19 for Mountain, 1/2 Sq. Ft.

60-25 for Poppy, 6" x 8"

00-74 for Trees, 1/2 Sq. Ft.

00-76 for Foliage, 6" x 8"

#### Youghiogeny Glass

Oceana Glass for Water, 1/2 Sq. ft.

1537 SP for Background, 1/2 Sq. Ft.

#### Additional Glass

Yellow for Poppy Center, Scrap

Green for Bud Stem, Scrap

Red for Bud, Scrap

#### Tools and Materials

7/32" and 3/16" Copper Foil

50/50 Solder 60/40 Solder

C- or U-Channel Lead Came

0.5 mm Chain

Tinned Copper Wire

1/4" Grinding Bit or Band Saw

Water Soluble Flux Black Patina

Marker Pen Burnishing Tool

1

Check your collection of small glass pieces to find suitable glass for the panel.

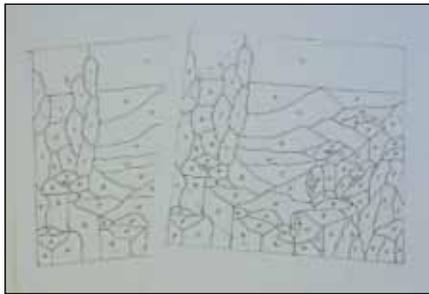


When using art glass, you invariably end up with a wide variety of odd pieces of glass that you simply don't want to dispose of. After a while, these pieces start to accumulate and take up space, so something has to be done with them, which is one of the things that lead me to create this panel.

I have taken the idea from a Tiffany window. I'm not sure how large the original window is, but my small panel is 12" in diameter.

2

Make two copies of the pattern, one for cutting out the pieces and one for the building template.



Make a jig to use for building the project.

3



You can either frame the design as a square panel, using thin wood slips around the outside edge, or as a circular panel as shown here. The 305 mm-diameter jig for the circular frame is cut with a router from 5 mm plywood board. It can be used again and again.

4

Plan your glass cuts and colors.



A lot of the pieces are quite small and can be cut from suitable off-cuts. I have included a recommended color list for art glass as well.

5

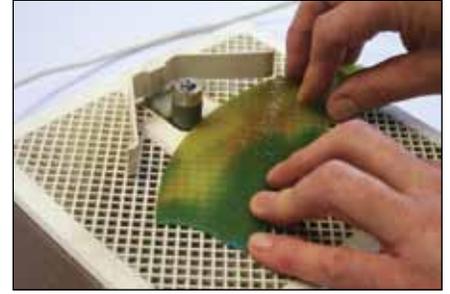
Hold the pattern piece on the glass surface and follow the edge of the pattern with the glass cutter to score the glass.



This cutting method takes a bit of practice. As an alternative, you can use a marker pen to transfer the pattern outline onto the glass, then score the line.

6

Grind the pieces to fit the layout pattern.



Care should be taken when cutting the outside edge pieces. I always cut outside the line first, then grind to fit before making the other cuts.

7

Starting at the top with the sky, assemble the pieces into the jig as they are cut.



8

When all of the pieces are cut and assembled in the jig, remove one piece at a time and attach the foil.



Use the 3/16" foil for the very small pieces such as the flower centers and buds.

9

Burnish the edges of the foil with a flat piece of metal.



I find that a putty knife works very well.

10

Place the pieces back into the jig as they are burnished.



I find this system very useful for making slight adjustments as the panel progresses.

11

When all of the pieces have been foiled, apply flux to the seams and solder them flat using 50/50 solder.



Remove the jig and repeat the fluxing and soldering process on the reverse side.

12

Frame the panel with lead came.



Stretch a section of 4 x 4 C- or U-channel lead came and cut a 970 mm length for the 305 mm diameter circle. This can now be eased around the edges to frame the piece.

13

Finish-solder the panel.



Apply flux to the seams again. For the final soldering I always use 60/40 and bead-solder both sides of the panel.

14

Use tinned copper wire to create hooks to use for hanging the panel and attach them to the perimeter lead.



15

Give the panel a thorough cleaning.



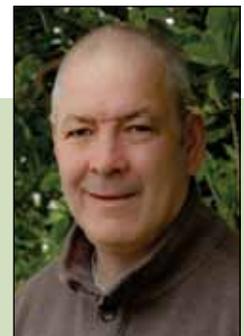
On completion of applying the solder, the panel can now be cleaned. I use a tiny amount of dishwashing detergent, some warm water, and a stiff brush to remove all of the flux and solder residues.

16

Apply black patina to all of the seams.

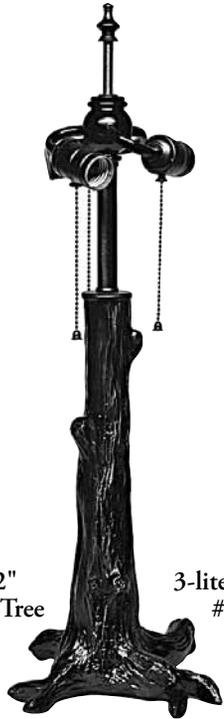


I use a small paintbrush to apply the patina, then leave it to dry for a couple of hours before the final cleaning. The finished piece can now be hung in a window of your choice. **GPO**



David Kennedy began his stained glass journey in 1984. After mastering the basics, he moved on to art glass, which has now become his passion. David doesn't use plating or painting techniques, preferring instead to take his inspiration from the glass itself. He lives on Hook Peninsula, located in a rural historic southeastern section of Ireland, where he produces panels and designs in his own unique style.

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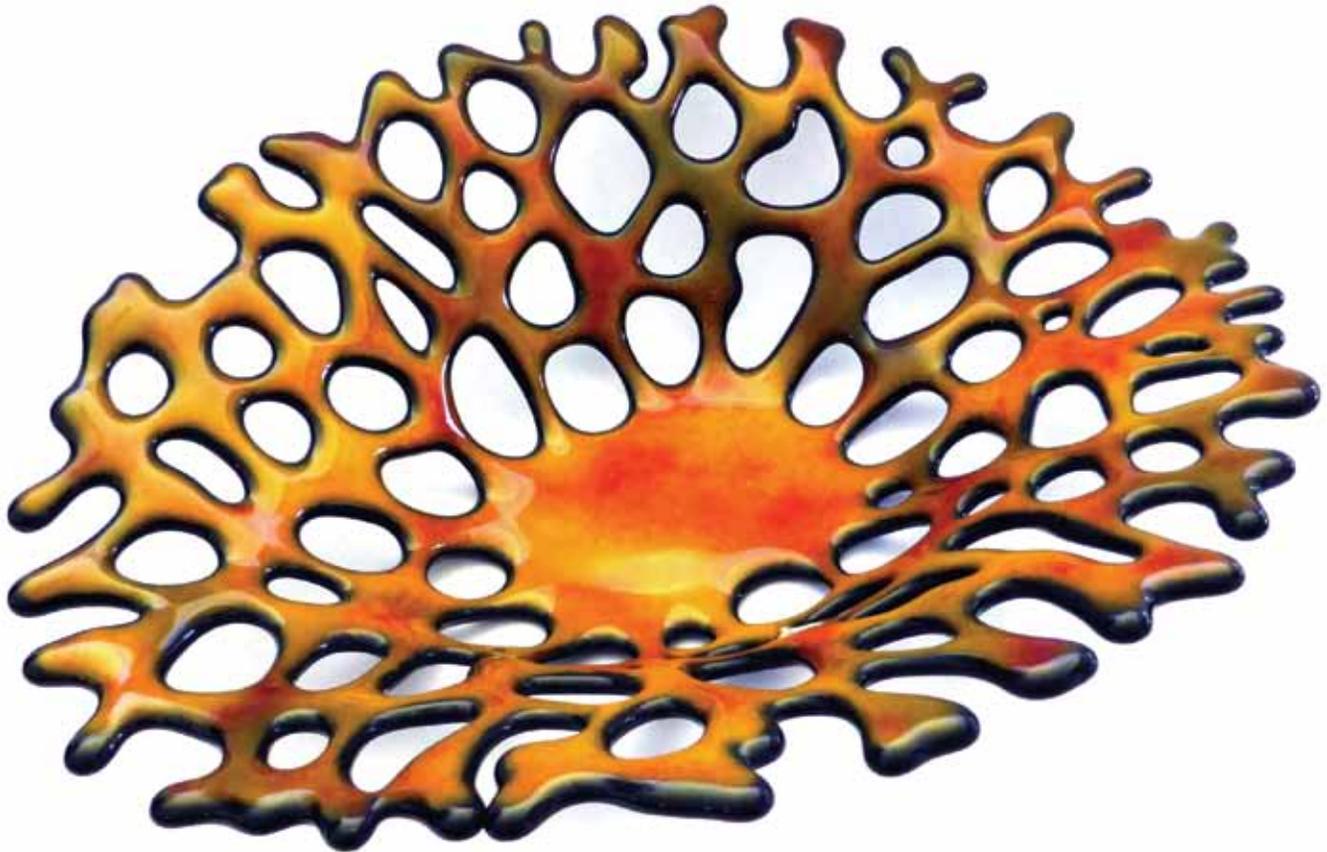
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Frederick, MD



# Sunset Coral Bowl

*Design, Fabrication, and Text by Kathy Griffiths*



This coral bowl is made using three separate firings. First we need to create a base piece using the black opalescent sheet glass. In the second stage, we'll add color with the glass powder. The final stage is slumping the piece into the bowl shape.

### System 96®

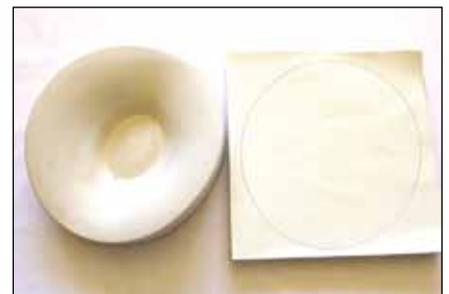
- 1009SF Black Opalescent for Base, 12" square
- F1-355-96 Marigold Opal Powder for Design
- F1-615-96 Lipstick Red Opal Powder for Design

### Tools and Materials

- Creative Ceramics Tacco Mold
- Bullseye ThinFire Shelf Paper
- Slumping Mold Frit Sifter
- Glass Cutter Kiln
- Respirator Mask Pencil
- Glass Glue (optional)

1

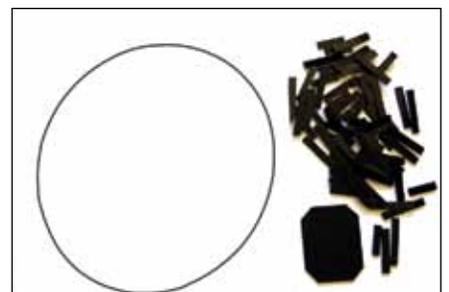
*Draw a template on the ThinFire paper to use when building the glass design.*



Cut a piece of the Thinfire shelf paper larger than the mold and place the mold on the shelf paper. Draw around the mold with a pencil to make a template, then place the shelf paper on the kiln shelf.

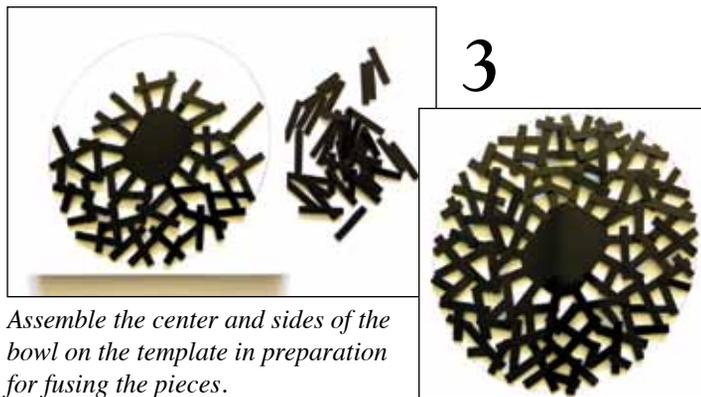
2

*Cut a glass rectangle for the bowl bottom and strips of various lengths for the sides.*



Cut a 4" x 3-1/4" rectangular piece from the sheet glass to fit the oval-shaped mold. You can cut off the corners to make a more oval shape if you want. This piece will become the center of the bowl. The size of the center depends on how much of the bowl you want to be done in the coral design. The smaller the center piece, the larger the coral motif.

Cut the rest of the sheet glass into 3/8"-wide strips of random lengths. I usually cut my strips 1-1/8" to 2-3/8" in length. Having the glass strips cut into different sizes helps to create a more organic look.

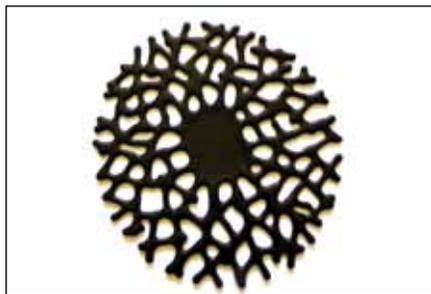


Assemble the center and sides of the bowl on the template in preparation for fusing the pieces.

Place the rectangular glass piece on the ThinFire shelf paper in the center of the template. Starting from the center piece, place the glass strips on the edge of the center glass and work your way to the edge of the template, layering the glass in a crisscross pattern.

Maintain gaps between the glass pieces, which is what will create the coral pattern when the piece is fired. The bigger the gaps, the larger the holes in the design. You can glue each individual piece in place and let the glue dry before firing in your kiln, if you prefer. I choose not to do this, however, since it's time consuming to glue each piece. I also like the randomness of the coral bowl design, so having a piece shift during firing is not an issue for me. Just make sure that each strip of glass is touching a least one other strip of glass.

4



Place the piece in your kiln and fire according to the following schedule.

Remember that each kiln fires differently, so you may need to make adjustments in this suggested schedule to fit your own particular kiln.

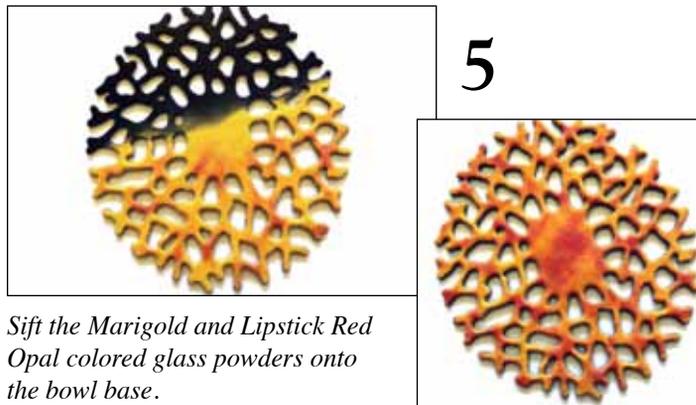
Hydrangea, System 96  
Turquoise Green Opal Base with  
Hydrangea Opal and Turquoise  
Blue Opal Powder

### Initial Fusing Schedule

- Segment 1: Ramp 250°F/hr to 1050°F and hold 30 min.
- Segment 2: Ramp 250°F/hr to 1250°F and hold 20 min.
- Segment 3: Ramp 300°F/hr to 1465°F and hold 10 min.
- Segment 4: Ramp 9999 (AFAP\*) to 950°F and hold 60 min.
- Segment 5: Ramp 200°F/hr to 800°F and hold 10 min.
- Segment 6: Ramp 300°F/hr to 150°F and Off.

\*as fast as possible.

Remove the piece from the kiln at 100°F. You now have a coral bowl glass base.



Sift the Marigold and Lipstick Red Opal colored glass powders onto the bowl base.

Wash off any fiber residue. Dry the base and place it upside down, with the flat side facing up, on a covered workbench. The flat side will help keep the sifted powder in place, stop the powder from sliding off the base, and give a crisper edge finish.

**Put on your respirator mask, which you should always use when applying powdered glass.** Breathing in the powder is hazardous to your health. Now to add some color.

Apply the powdered glass by sifting an even, thick layer onto the entire base, making sure that the base is fully covered. Thick coatings of powder reduce the chance of the base glass color from showing through. You can use one single color of powder to create a two-tone bowl or a mix of different color powders sifted randomly onto the base to create patterns.



Once the base is fully covered with powder, place the piece back into the kiln on clean shelf paper, being careful not to move any of the powder. Refire the piece using the same schedule as the first firing, but lower the hold time to 5 minutes for the top temperature.

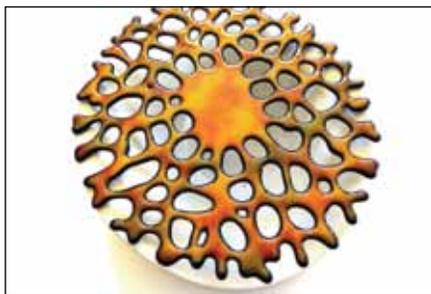
### Powdered Glass Firing Schedule

- Segment 1: Ramp 250°F/hr to 1050°F and hold 30 min.
- Segment 2: Ramp 250°F/hr to 1250°F and hold 20 min.
- Segment 3: Ramp 300°F/hr to 1465°F and hold 5 min.
- Segment 4: Ramp 9999 (AFAP\*) to 950°F and hold 60 min.
- Segment 5: Ramp 200°F/hr to 800°F and hold 10 min.
- Segment 6: Ramp 300°F/hr to 150°F and Off.

\*as fast as possible.

# 6

*Slump the coral piece into a bowl-shaped mold.*



When cooled to 100°F, remove the base piece from the kiln and clean it. The base is now ready for slumping. Place the glass, colored powder side up, onto the mold and put it back into the kiln for the final firing.

### Slumping Schedule

- Segment 1: 250°F/hr to 1050°F and hold 30 min.
- Segment 2: Ramp 250°F/hr to 1250°F and hold 10 min.
- Segment 3: Ramp 9999 (AFAP\*) to 950°F and hold 60 min.
- Segment 4: Ramp 200°F/hr to 800°F and hold 10 min.
- Segment 5: Ramp 300°F/hr to 150°F and Off.

\*as fast as possible

Remove the piece from the kiln at 100°F.



*Confetti, System 96 Black Base decorated with Glassline Paints*

I hope you have enjoyed this tutorial for creating your own coral bowl. These bowls can be made with 90 COE glass instead of 96 COE using full fuse and slumping schedules for 90 COE glass instead of those provided in this tutorial.

For variety in your bowls, try using fine frit instead of powders for different effects, or even clear base glass instead of the black with the colored powders. I have also made these bowls with a black coral base, then sponged it with different colors of Glassline Paints using the same firing schedules.

**GPO**

*Kathy Griffiths lives in a small picturesque country town surrounded by mountains and vineyards in the Southwestern part of Western Australia only thirty miles from the coast. Living in such a beautiful part of the world is reflected in a lot of her glass art designs.*



*A self-taught artist, Kathy has been doing all types of arts and crafts since childhood, and in 2003 she discovered the beauty of glass. Loving the mesmerizing colors and textures of dichroic glass, she purchased her first hobby kiln and started creating one-of-a-kind glass jewelry pieces. Over the years there has been a natural progression in her work to larger kilns and larger pieces of glass art that include plates, bowls, vases, and decorative pieces.*

*Kathy has two adult children and a very supportive husband who has always encouraged her to follow her creativity. Her glass art is displayed in local art galleries around the region and continues to be shipped to new homes worldwide.*

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# Glistening Garden Pals

*Design, Fabrication, and Text by Lisa Vogt*



Your summertime gardening fun starts right here! Make your special outdoor retreat more inviting than ever with these dazzling petite turtles. The three-dimensional assembly may be a bit more complex than other simpler projects, but you'll quickly be charmed. In no time, you'll see that these friendly little darlings are well worth the extra effort.

Most of my projects are made with two layers of glass plus an accent layer. Building this way ensures that the project will remain

true to size after the fusing process. The turtle shell in this project, however, is made with three layers of glass plus an accent layer. This extra layer causes the shell to grow slightly during the fusing phase. In this particular application the growth is welcome, because it rounds out and softens the finished shape of the turtle's shell.

This fun little fellow is made by gluing two fused and slumped glass components together. We'll start by making the turtle's shell.

## **Spectrum System 96®**

100SFS Clear for Base Layer of Turtle Body and Clear Cap on Shell, 1/4 Sq. Ft.  
1009SF Black for Second Layer of Turtle Body and Base Layer of Shell, 1/4 Sq. Ft.

## **Coatings By Sandberg**

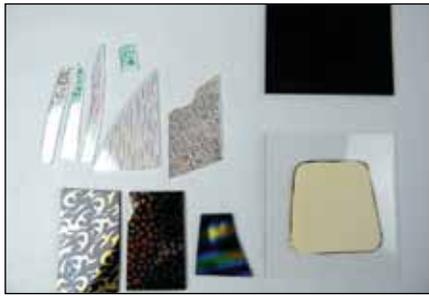
Patterned Dichroic Glass, Random Scraps, 1/8 Sq. Ft.

## **Tools and Materials**

1/2"-Thick Primed Fiberboard, 2-1/2" x 4"  
Fiber Blanket Scrap E6000 Adhesive

1

Select your dichroic glass patterns, then cut out the base and cap glass pieces.



Using the pattern as a guide, cut one shell shape out of black glass for the base and one shell shape out of clear for the cap or third layer. Grind the glass pieces if needed to refine the shapes. Set the clear piece aside.

2

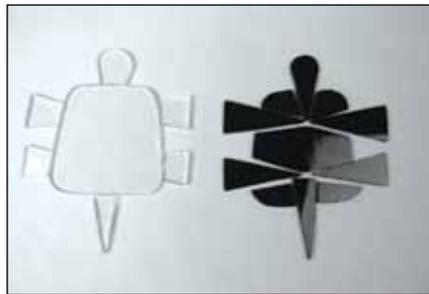
Fit the dichroic glass pieces you have selected together to make the second layer of the shell.



Completely cover the black base layer with a patchwork of dichroic scrap glass. Cap the dichroic with the previously cut clear. Stack two or three pieces of clear dichroic with a pattern on top of the clear cap. Now for the body.

3

Cut layer one of the turtle's body out of clear glass and layer two out of black glass.



Using the pattern as a guide, cut the base layer pieces for the turtle's body out of the clear glass. Using the second pattern, cut the second layer pieces out of the black glass.

Stack the two layers of the body, with the clear glass on the bottom, and the three shell layers plus the shell accent pieces on a primed shelf or fiber paper inside the kiln.

4



Cut two tiny pieces of dichroic glass for the turtle's eyes and position them on the black glass accordingly. When you load the assembled turtle shell into the kiln, be sure to leave enough room between the shell and the body components for the shell to grow.

5

Heat to a full fuse using the guide provided at the end of the tutorial.



Cut a 2-1/2" x 4" piece of 1/2"-thick fiberboard and place it, along with two pieces of balled-up fiber blanket, into the kiln.

6



Position the fused glass turtle body on top of the fiberboard and the fused glass shell on top of the fiber blanket.

7



Position the body so that the legs and tail hang over the edges. Tuck a small balled-up scrap of fiber blanket under the tail to minimize the slump. Center the shell on top of a second balled-up piece of fiber blanket.

Our goal is to give the shell height and at the same time have the entire perimeter slump enough to make solid contact with the kiln shelf. This flat rim is necessary for good connection when we glue the shell to the body. For that reason, avoid making the fiber ball too big or too tall. It should be about 3/4" wide, 1" long, and 1/2" thick.

8

Slump the glass using the slumping guide provided.



When cool, remove the slumped glass from the kiln. Clean the glass top and bottom with water, then dry with a towel. Glue the turtle's slumped shell onto the top of the slumped body with E6000 adhesive.

Introduce your newborn friends to your garden where you can enjoy their cheery company often. P.S.—If you can't bear to part with these loveable tiny turtles, they are equally at home resting on your desk as they are sunning in your garden.

GPO

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

## Firing Schedules

All kilns fire differently. Test-fire your kiln and take notes to ensure you get the desired results.

## Fusing Guide

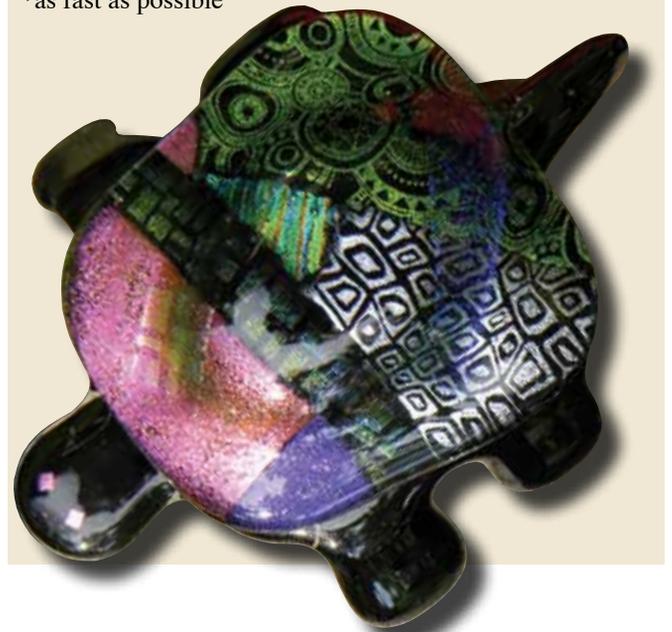
- Segment 1: Ramp 300°F/hr to 1300°F and hold 30 min.
- Segment 2: Ramp 500°F/hr to 1465°F and hold 10 min.
- Segment 3: Ramp 9999 (AFAP\*) to 960°F and hold 40 min.
- Segment 4: Cool to room temperature.

\*as fast as possible

## Slumping Guide

- Segment 1: Ramp 300°F/hr to 1265°F and hold 10 min.
- Segment 2: Ramp 9999 (AFAP\*) to 960°F and hold 40 min.
- Segment 3: Cool to room temperature.

\*as fast as possible



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



*Lisa is the author of fourteen design books and a series of instructional videos in addition to frequent articles for industry magazines and fiction for publication. She also lectures at national and regional seminars and has been a featured artist on HGTV, PBS, and Glass Patterns Quarterly Webinars.*

*A huge supporter of public art, Lisa regularly contributes artwork for auction to benefit local, regional, and national charities. Her home and studio are located north of Tampa Bay in Wesley Chapel, Florida, where she resides with her husband and two daughters. Visit [www.LisaVogt.net](http://www.LisaVogt.net) to find out more about her work and seminars.*

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# Scottish Thistle Bud

*Design by Denise Rogers, Text by Darlene Welch*



The Scottish thistle, an ancient Celtic symbol of nobility of character, is the national emblem of Scotland. This 12" x 12" design by Maine artist, Denise Rogers, owner of Pisces Glass Works, features the beauty as well as the thorns of this intriguing plant. Careful attention to the selection of glass colors and grains provides a realistic look, while letting the thorns extend into the border area lends a feeling of depth to the design.

This pattern is just one of many stunning designs available from Glass Pattern Source. The Pisces Glass Works pattern collection features realistic portrayals from nature including designs for horses, dogs, wildlife, landscapes, and florals. Custom patterns are also available from the artist. Visit [glasspatternsources.com](http://glasspatternsources.com) to view more of the beautiful work from Denise.

**GPO**

## **Spectrum Glass Co.**

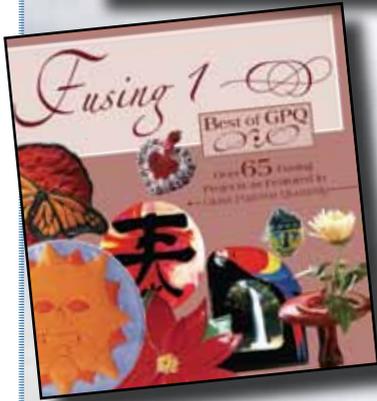
- 349-6S Dark Purple/White Wispy for Bud Center, 1/2 Sq. Ft.
- 349-2S Light Purple/White Wispy for Bud Center, 1/2 Sq. Ft.
- 349-1S Pale Purple/White Wispy for Flower Center, 1/2 Sq. Ft.
- 329-1S Pale Green/White Wispy, 1 Sq. Ft.
- 329-6S Dark Green/White Wispy for Bases of Leaves, 1 Sq. Ft.
- 307S Clear/White for Thorns, Scrap
- 828-52S Sea Green for Leaves, 1 Sq. Ft.
- 201-61S Ivory Opalescent for Border, 1 Sq. Ft.

## **Tools and Materials**

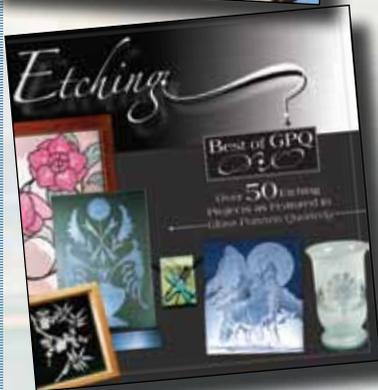
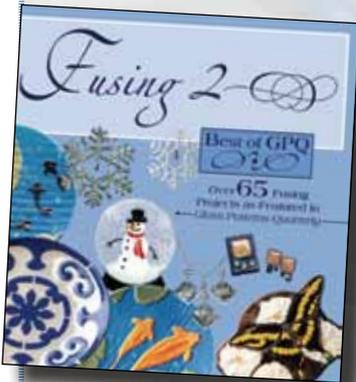
- 7/32" Copper Foil Flux Solder
- Black Patina 1/2" U-Channel Zinc

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Eric Markow (left) and Thom Norris (right) with their Paragon Pearl-56. Eric and Thom spent several years developing the woven glass technique shown above. Photo by Marni Harker.

## “We love the even, consistent heat of the Paragon Pearl-56” — Markow & Norris

Eric Markow and Thom Norris are noted for creating woven glass kimonos, which have been called “impossibly beautiful.” The kimonos weigh an average of 125 pounds.

Eric and Thom fire their glass in nine Paragon kilns. “Now that we’ve done all our testing, and have actually cooked sculpture in the Pearl-56, it is our favorite kiln and we love the even, consistent heat,” they said recently.

The Pearl-56 has elements in the top, sidewalls, and floor. The kiln uses advanced power ratio technology to balance the heat between the top and bottom sections in increments of 10%.

The digital Pearl-56 has lockable casters, levelers, two

peepholes in the front, two vent holes in the top, mercury relays, and a ceramic fiber lid. The Pearl-56 firing chamber is 30” wide, 56” long, and 16 ½” deep (top to bottom).

If you are not yet ready for the massive Pearl-56, then choose the exact size Paragon kiln that you need. We offer a full range of glass kilns from the small FireFly to the intermediate Fusion and CS clamshells to the Ovation ovals.

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Autumn Sunset Kimono by Markow & Norris. The partners fire their glass in Paragon kilns. Photo by Javier Agostinelli.



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# Mariners' Guardian

Design by Kevin Thornhill, Text by Delynn Ellis

The unmistakable sight of a lighthouse cresting the coastal shoreline is a beacon of safety for those who travel the sea. While some of these historic navigational aids have gone dark over the years due to the onset of GPS and other electronics, these structures have become a physical part of beach landscapes and popular tourist destinations.

Artist Kevin Thornhill's inspiration for this 18" x 24" *Mariner's Guardian* design comes from his Canadian Nova Scotia upbringing. Living on the Atlantic coast, lighthouses are a part of his background along with the beautiful scenic coastlines on which they are situated. "Lighthouses not only guide mariners but also keep us rooted in our marine heritage as pillars of hope and light," Kevin says.

Combinations of blues, purples, amber opals and Wisspys from Wissmach Glass bring to life crashing waves on a rocky shoreline with the iconic tower perched above. The catwalk around the lighthouse, window dividers, and the lightning rod can be constructed with wire overlay. Kevin enjoys designing patterns for stained glass and seeing them interpreted and brought to life. You can see more of his designs at [glasspatterns.com](http://glasspatterns.com). **GPO**



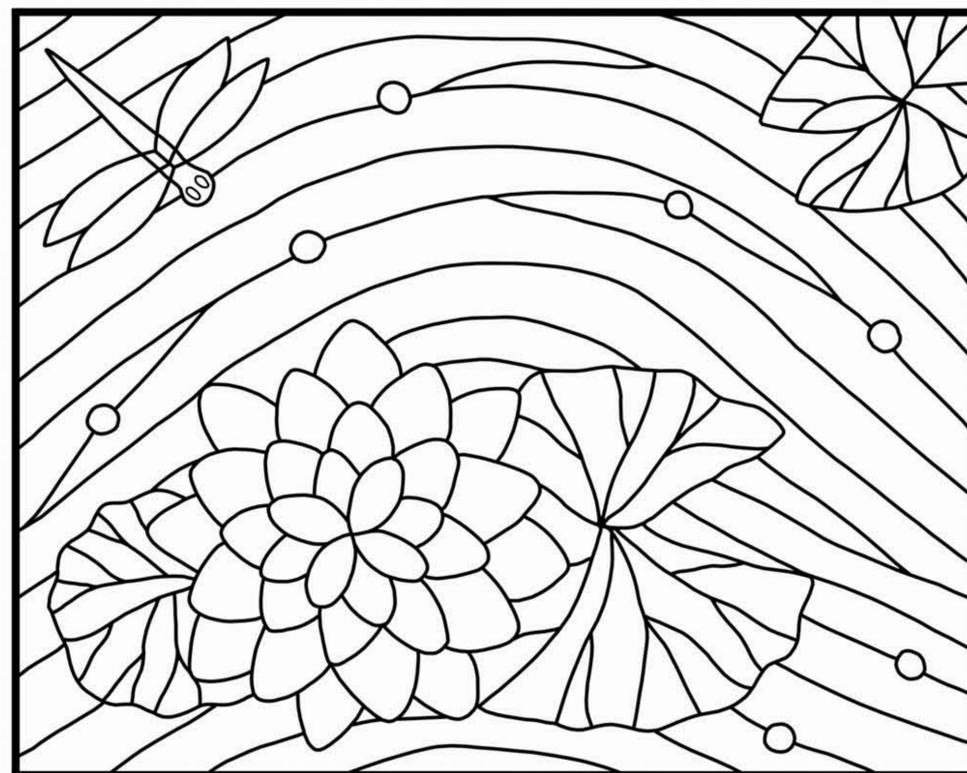
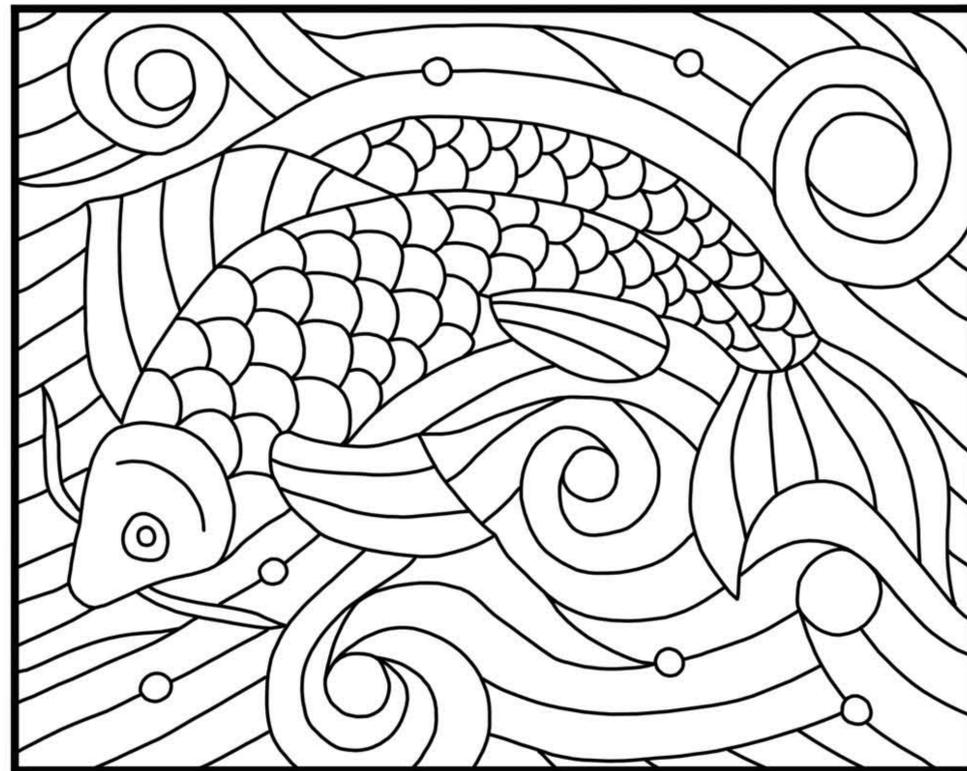
## Wissmach Glass Company

- 434-L Dark Blue/Medium Purple/Opal/Crystal for Sky, 4 Sq. Ft.
- WO-437 Dark Blue/Light Amber/Medium Purple/Opal/Crystal Wisspy for Clouds, 3 Sq. Ft.
- 437-L Dark Blue/Light Amber/Medium Purple/Opal/Crystal for Water, 1 Sq. Ft.
- 77-L Light Brown/Yellow Green/Opal for Lighthouse, 1 Sq. Ft.
- 613-D Williamsburg Blue/Opal/Crystal for Lighthouse, Scrap
- 565-D Gray Opal/Dark Gray for Lighthouse and Border, 4 Sq. Ft.
- 42-L Burgundy/Medium Amber for Roof, Scrap
- 155-L Dark Purple/Green/Light Opal/Crystal for Rocks, 1 Sq. Ft.
- 1-L Silver Yellow/Opal/Crystal for Light, Scrap

## Tools and Materials

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

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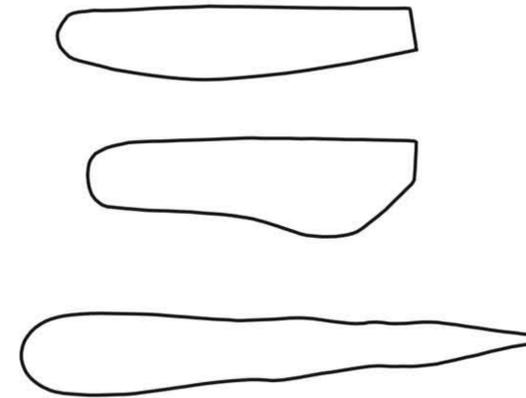
**Golden Koi**  
Fused Glass Mosaic with Depth

*Design by Wesley R. Wong*

**System 96° Sheet Glass**  
100SFS Clear Glass, 2 Sq. Ft.  
60-355-96 Marigold Opal Glass, 4" x 6"  
60-2502-96 Red Opal Glass, 4" x 4"  
200SF White Opal Glass, 4" x 4"  
210-71SF Ivory Opal Glass, 6" x 8"  
230-71SF Hydrangea Opal Glass, 6" x 6"  
233-75SF Mariner Blue Opal Glass, 6" x 6"  
230-72SF Medium Blue Opal Glass, 4" x 4"  
132SF Light Blue Transparent Glass, 6" x 5"  
60-005-96 White/Clear Streaky Glass, 10" x 9"  
60-7550-96 Fern Green/Clear Streaky Glass, 10" x 5"  
12-424-96 Cobalt Blue Streamer Bits Glass, 10" x 8"  
1009SF Black Opal Glass, Scrap  
151SF Cherry Red Transparent Glass, Scrap

**System 96° Frit**  
F1-171-96 Orange Transparent  
F1-5333-96 Deep Aqua Transparent  
F1-2206-96 Dark Green Opal  
F1-2335-96 Mariner Blue Opal  
F3-2602-96 Yellow Opal  
**Additional Glass**  
Clear Dichroic, Scrap

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**Jeweled Dragonfly Suncatcher**  
An Introduction to Stained Glass

*Design by Lidia K. Anderson*

**Spectrum Glass Co.**  
1/100K, Iridescent Clear Krinkle for Wings, 5" x 5"  
533-1W, Sky Blue Waterglass for Body, 2" x 6"

**Snail and Coneflower**

*Design by Chantal Poiré*

**Spectrum Glass Co.**  
1/61S Yellow Transparent, 1/2 Sq. Ft.  
1/343-25SF Grape Solid Transparent Iridescent, 1 Sq. Ft.  
518-18SF Bronze Transparent, 1-1/2 Sq. Ft.  
110-1A Pistal Amber Antique™, 1/2 Sq. Ft.  
BR/CLEAR Clear Baroque™, 1/4 Sq. Ft.



**Mariners' Guardian**

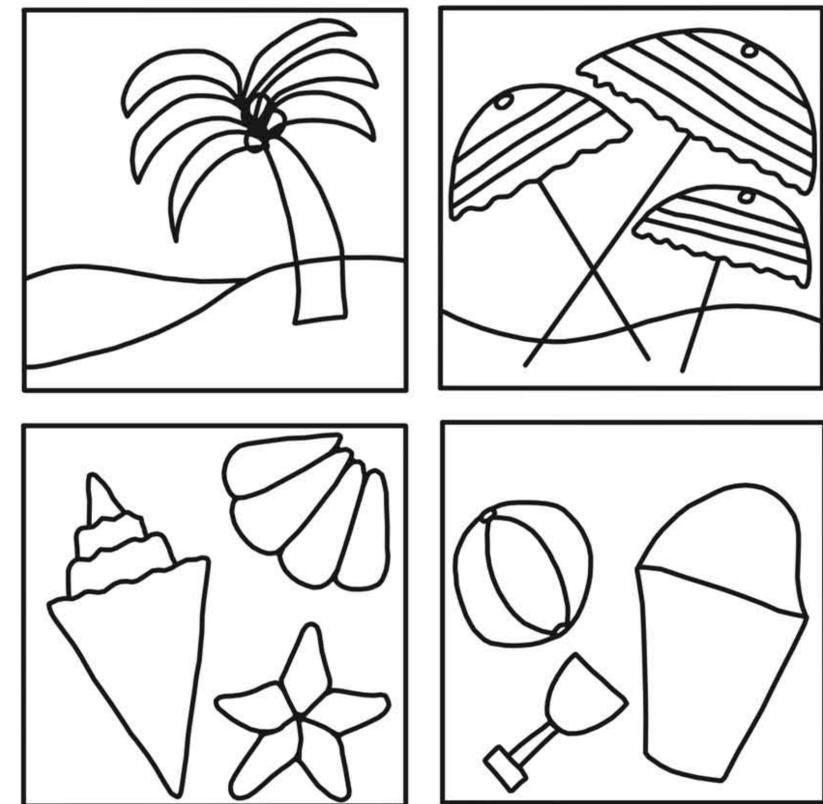
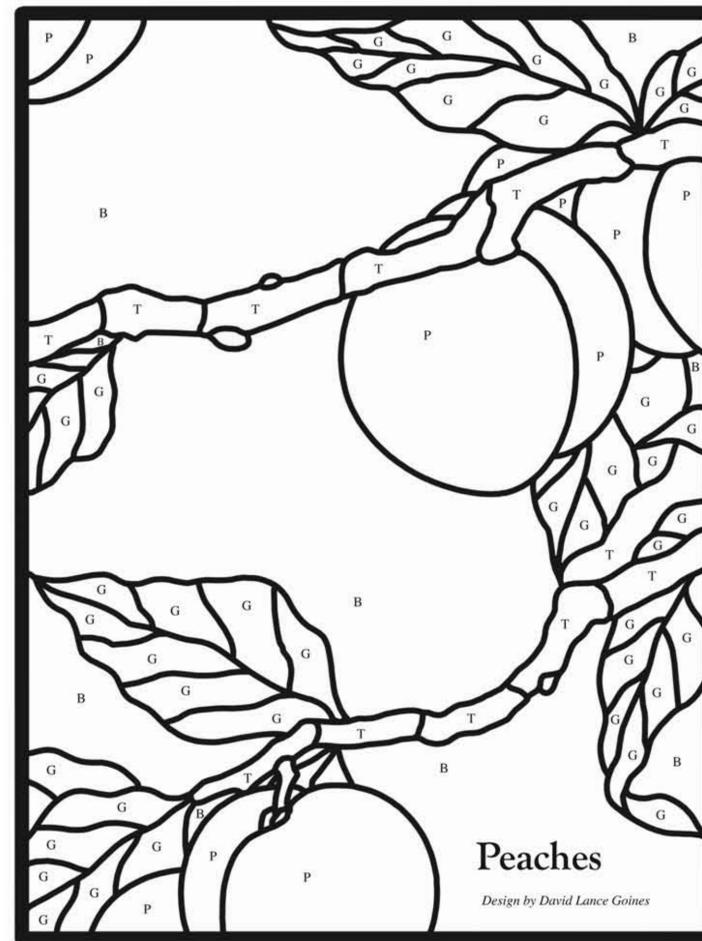
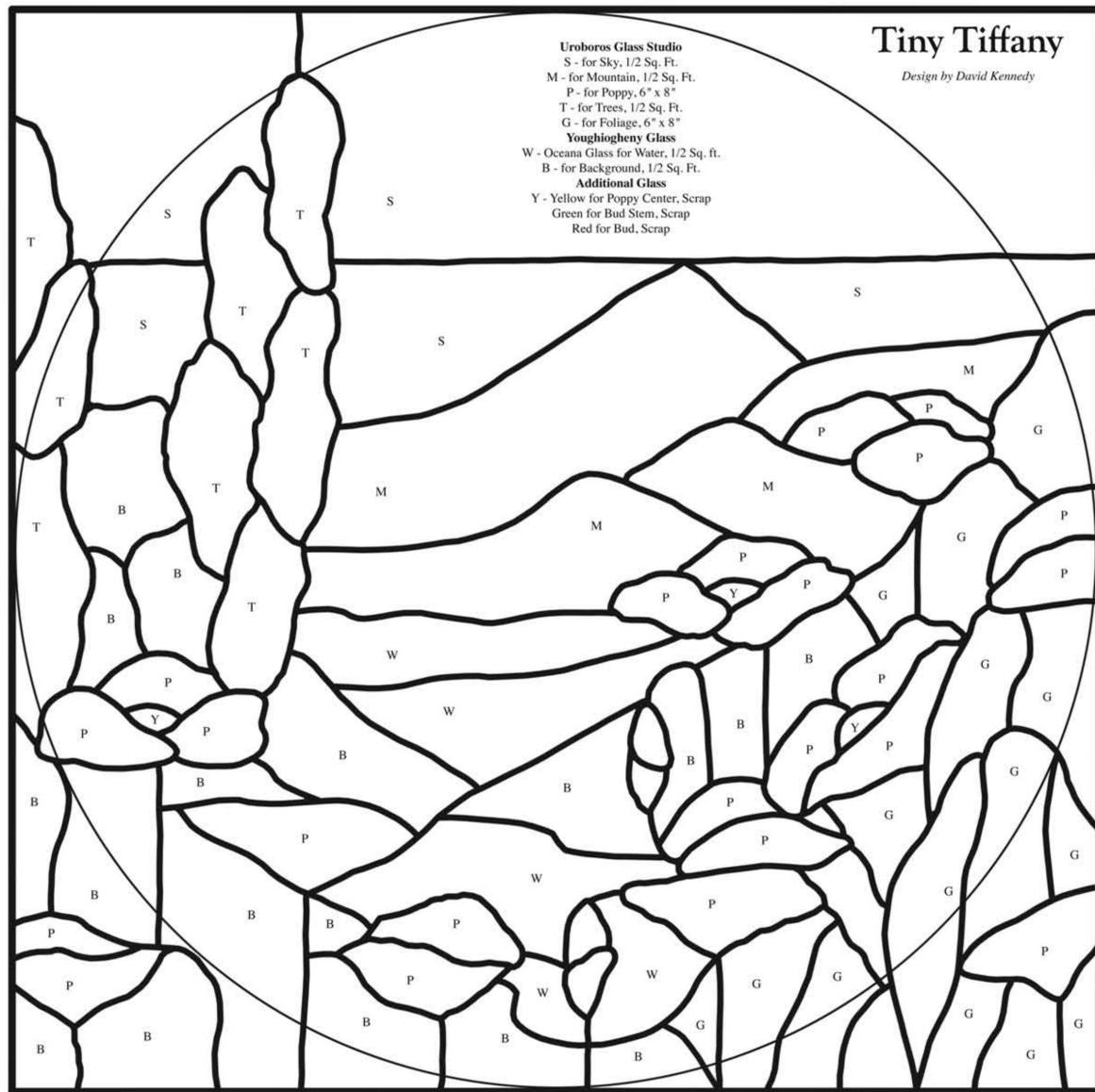
*Design by Kevin Thornhill*



*Enlarge to desired size*

**Wissmach Glass Company**

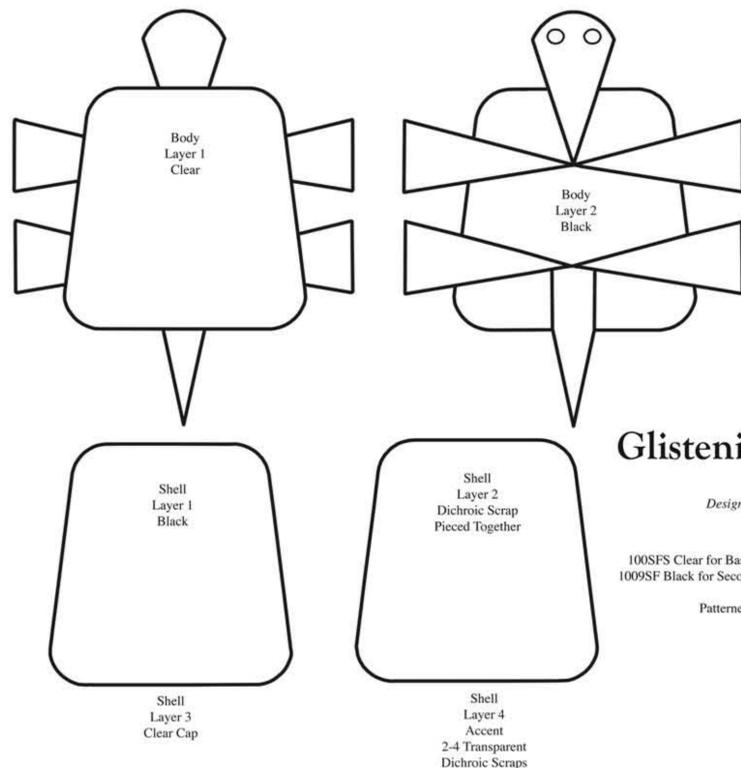
434-L Dark Blue/Medium Purple/Opal/Crystal for Sky, 4 Sq. Ft.  
WO-437 Dark Blue/Light Amber/Medium Purple/Opal/Crystal Wispy for Clouds, 3 Sq. Ft.  
437-L Dark Blue/Light Amber/Medium Purple/Opal/Crystal for Water, 1 Sq. Ft.  
77-L Light Brown/Yellow Green/Opal for Lighthouse, 1 Sq. Ft.  
613-D Williamsburg Blue/Opal/Crystal for Lighthouse, Scrap  
565-D Gray Opal/Dark Gray for Lighthouse and Border, 4 Sq. Ft.  
42-L Burgundy/Medium Amber for Roof, Scrap  
155-L Dark Purple/Green/Light Opal/Crystal for Rocks, 1 Sq. Ft.  
1-L Silver Yellow/Opal/Crystal for Light, Scrap



**A Day at the Beach . . . in Glass!**

Design by Erica Biery Collins

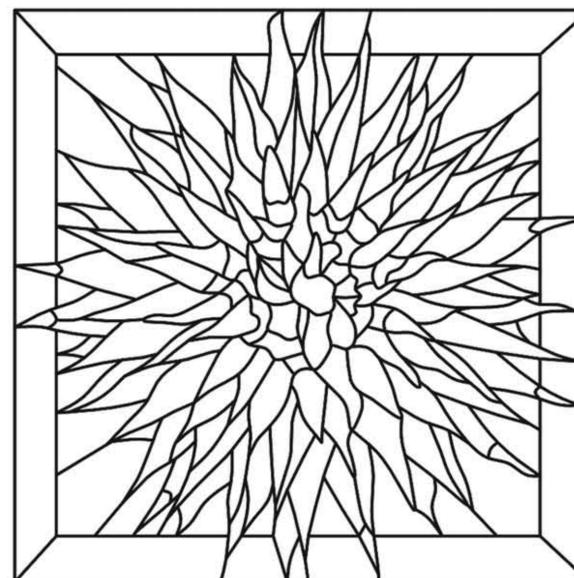
- System 96®  
Sheet Glass**  
4" x 4" Clear for Coaster Bases, 4  
3/4" x 3/4" Clear for Wine Charm Bases, 4  
110.2SF Pale Amber for Sand  
533-3SF Deep Aqua for Sky  
130.8SF Pale Blue for Sky  
532-1SF Caribbean Blue for Water  
211-76SF Chocolate for Palm Tree  
397-2SF Pink/Opal for Conch Shell  
60-93-96 Root Beer/Cream for Starfish  
96-6115.7 Sedona for Scallop  
60-2502-96SF Red for Bucket and Shovel  
200SF White for Background  
136SF Dark Blue for Ball  
171SF Orange for Ball
- 132SF Light Blue for Blue Flip-Flop  
60-421-96SF Riviera Blue for Blue Flip-Flop  
171SF Orange for Orange Flip-Flop  
271-71SF Persimmon for Orange Flip-Flop  
161SF Yellow for Yellow Flip-Flop  
260-72SF Yellow for Yellow Flip-Flop  
528-1SF Sea Green for Green Flip-Flop  
60-726-96 Apple Jade for Green Flip-Flop  
Scrap Glass for Coaster and Charm Embellishments
- Frit**  
F2-1108-96 Medium Amber Frit for Coaster Decorations  
F2-29-96 Cherry Blossom for Conch Shell  
F2-200-9 White Frit for Clouds
- Additional Glass**  
White, Blue, and Orange Stringer for Umbrella Designs



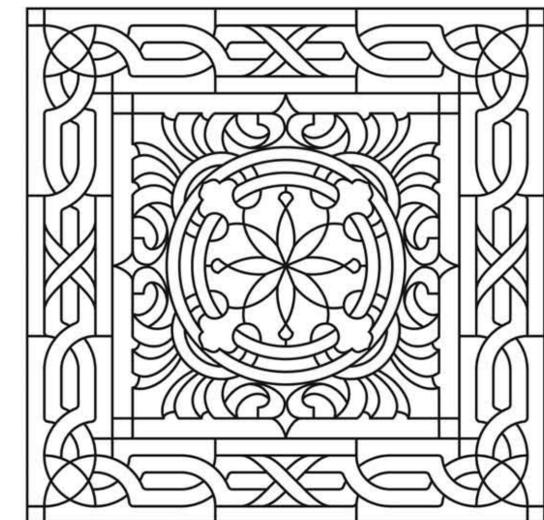
**Scottish Thistle Bud**

Design by Denise Rogers

- Spectrum Glass Co.**  
349-6S Dark Purple/White Wispy for Bud Center, 1/2 Sq. Ft.  
349-2S Light Purple/White Wispy for Bud Center, 1/2 Sq. Ft.  
349-1S Pale Purple/White Wispy for Flower Center, 1/2 Sq. Ft.  
329-1S Pale Green/White Wispy, 1 Sq. Ft.  
329-6S Dark Green/White Wispy for Bases of Leaves, 1 Sq. Ft.  
307S Clear/White for Thorns, Scrap  
828-52S Sea Green for Leaves, 1 Sq. Ft.  
201-61S Ivory Opalescent for Border, 1 Sq. Ft.



Enlarge to desired size



Enlarge to desired size

**Splendor in the Utopian World**

Design by Randolph Raum

- Kokomo**  
5NLL Purple/Amber/Blue for Center Background, 8 Sq. Ft.  
**Wissmach**  
EM50 Dusky Rose for Border, 5 Sq. Ft.  
**Action Bevels**  
TILE-114



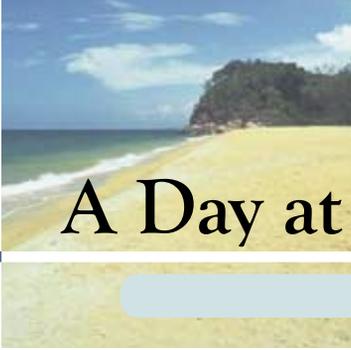
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# A Day at the Beach . . . in Glass!

*Design, Demonstration, and Text by Erica Biery Collins*

Going to the beach in the summertime has always been one of my absolute favorite things to do. The inspiration for these coasters and wine charms comes from fond memories of our family trips. It is so great to be able to capture some of these special places and enjoy them year round! These are some great projects for fellow beach lovers to decorate their houses and patios. They also make great gifts for friends with beach houses.

Feel free to change the scenes or colors depending on where your travels take you. These were taken primarily from beaches on the East Coast in New Jersey, Delaware, and Florida. I thought it would be fun to add the flip-flop wine charms for the perfect beach set. For this project, I used all System 96 glass, frit, and stringers.



## **System 96®**

### **Sheet Glass**

- 4" x 4" Clear for Coaster Bases, 4
  - 3/4" x 3/4" Clear for Wine Charm Bases, 4
  - 110.2SF Pale Amber for Sand
  - 533-3SF Deep Aqua for Sky
  - 130.8SF Pale Blue for Sky
  - 532-1SF Caribbean Blue for Water
  - 211-76SF Chocolate for Palm Tree
  - 397-2SF Pink/Opal for Conch Shell
  - 60-93-96 Root Beer/Cream for Starfish
  - 96-6115.7 Sedona for Scallop
  - 60-2502-96SF Red for Bucket and Shovel
  - 200SF White for Background
  - 136SF Dark Blue for Ball
  - 171SF Orange for Ball
  - 132SF Light Blue for Blue Flip-Flop
  - 60-421-96SF Riviera Blue for Blue Flip-Flop
  - 171SF Orange for Orange Flip-Flop
  - 271-71SF Persimmon for Orange Flip-Flop
  - 161SF Yellow for Yellow Flip-Flop
  - 260-72SF Yellow for Yellow Flip-Flop
  - 528-1SF Sea Green for Green Flip-Flop
  - 60-726-96 Apple Jade for Green Flip-Flop
- Scrap Glass for Coaster and Charm Embellishments*

One of the nice things about this project is that it uses almost all scrap glass, so use whatever small pieces you have around to create the embellishments. As you select the glass for your own project, make sure you stay in the same COE when working on a fused project to prevent cracks and bubbles.

### **Frit**

- F2-1108-96 Medium Amber Frit for Coaster Decorations
- F2-29-96 Cherry Blossom for Conch Shell
- F2-200-9 White Frit for Clouds

### **Stringer**

- White, Blue, and Orange Stringer for Umbrella Designs

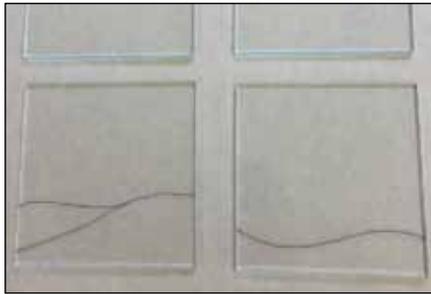
### **Tools and Materials**

- Fine-Point Black Permanent Marker
- Unscented Liquid Hair Spray Drip Bottle
- Mosaic Cutters E6000 Adhesive
- Respirator or Dust Mask Small Paintbrush

## Coasters

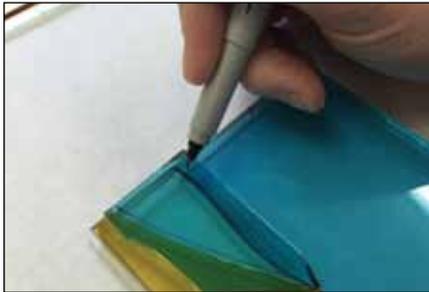
1

Start with 4 clear glass bases, each 4" x 4" square.



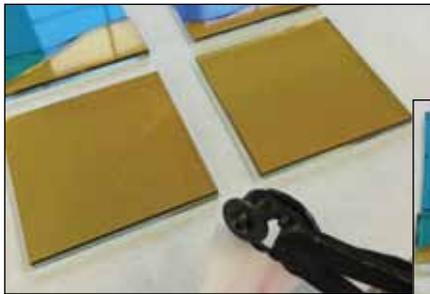
2

Sketch the water and sand in permanent marker on the base to make it easier to cut and organize the pieces.



Using a fine-point black marker will allow for more precise cuts.

3



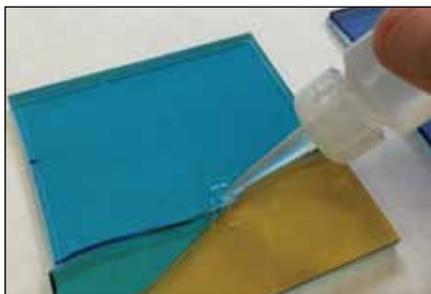
Cut the background colors for the sand, water, and sky.



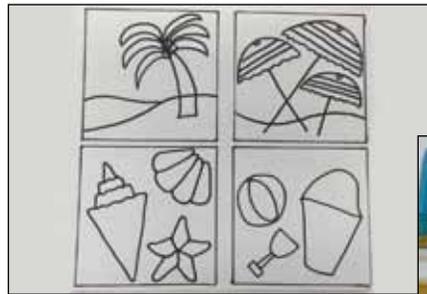
I chose to use transparent glass for the background colors so the light would come through when used on a glass table.

4

As you cut each base piece, glue the background piece to the clear base with unscented liquid hair spray.



This allows the glue to dry by the time you are ready to add the embellishment pieces. I almost always use an unscented liquid hair spray in a drip bottle for my glue, because it burns off cleanly. Put 1 to 2 drops next to each piece so that it will seep under the piece. The glue takes 15 to 20 minutes to fully dry.



5

Once the background pieces are cut and glued on top of the clear pieces, add the embellishments.

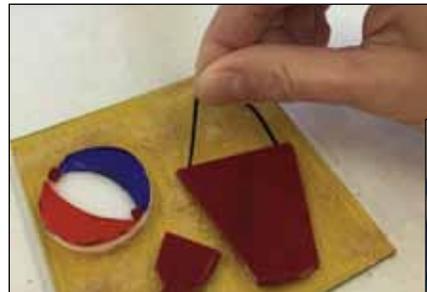


I cut out the palm tree, shells, bucket, shovel, and ball from colored glass, then glued those to the background pieces. For the shells, take note of the "grain" of the glass. Anytime I am using glass with wispies, I try to use the grain to add interest to the piece. If you keep the grain going in the same direction on the shells, it will add more detail. I used the mosaic cutters, which are a great tool to use in place of a grinder, to "ruffle" the bottoms of the umbrellas to add texture.

For the bucket handle, I used a piece of black vitrigraph stringer, but you can also use black Glassline paint or black fine frit pushed in an upside-down U with a paintbrush. I also used stringers for the designs on the umbrellas. I used a wire cutter to cut each one, because I wanted them to be a specific size.

For the beach ball, I cut out a 1-1/2" white base and put the transparent blue and orange on top of the white, then used little transparent red dots at the top and bottom of the ball to add detail. One of my favorite things in this project is the contrast between the transparent background of the coasters and the opal embellishments on top.

6



Sprinkle frit on each coaster to lend texture and detail to each piece.



If you have any gaps between your shells or palm tree pieces, you can use frit to fill in the spaces or add texture to the shells. A small brush can be used to move the frit around to make the desired patterns.

I sprayed each piece with hair spray direct from the bottle to secure the frit. Do not spray too close to the piece, or the frit will fly! Spray from over the top of the piece and allow it to fall onto the coasters.

**Note:** It is *essential* that you wear a respirator or dust mask when you are working with glass frit to prevent breathing in the glass particles.





7

Carefully load the coasters into the kiln and take them to a full fuse so each piece goes flat.



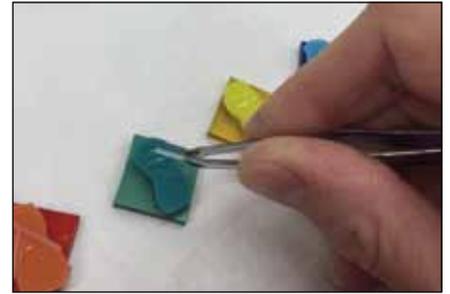
I applied rubber feet to the coasters to prevent them from sliding or scratching a surface after they were fired.

### Wine Charms

Start by cutting 4 transparent color bases for the charms, all 3/4" x 3/4". I chose to keep the colors simple on this project to help distinguish the color of the wine charm. I wanted to keep this project small so it wouldn't end up cracking the bottom of the wine glass!

To make the wine charms, sketch out a flip-flop on top of the transparent glass to gauge the size of it and start cutting the coordinating opal color for the flip-flop.

8  
After gluing the flip-flop to the transparent glass, add 3 white stringers to the top to resemble the strap on the flip-flop.



9  
Take the project to a full fuse in the kiln or a tack fuse if you prefer to add some texture.



10  
Glue an earring bail to the top corner of each charm using E-6000 adhesive.



After the glue has dried, add a silver earring hoop to the bail and you're done! I hope you enjoy creating this project as much as I enjoyed designing it. Have a great summer! **GPO**



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Erica Biery Collins is a glass artist from Northampton, Pennsylvania, who was introduced to the glass industry many years ago while working at a stained glass warehouse. During her tenure there, she traveled the country learning various glass techniques from world-renowned artists. She now uses her knowledge and skills to create stunning glass pieces using fused glass, stained glass, and mosaics.

Erica also exhibits in local juried fine art shows, gift shops, and art galleries throughout Pennsylvania. She emphasizes finding ways to integrate the various mediums for architectural purposes such as lighting, wall mosaics using fused pieces, stand-alone stained glass, or mosaic designs with fused glass accents.



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## What's New



**Evenheat Kilns** introduces the **Quiet Drive Solid State Relay System**. This new system does away with traditional mechanical relays and uses solid state relays instead. Mechanical relays wear out and fail at some point, but solid state means that there are no moving parts, nothing to wear out, and nothing to replace. Solid state also means superior heating element operation, resulting in tighter temperature control, longer heating element life, and enhanced performance. The Quiet Drive Solid State Relay System is available as an option on all Evenheat models equipped with electronic controls.

989856-2281

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

**Ed Hoy's International** is now open to the public, both online and onsite, through the **Ed Hoy Concept Store**. Glass enthusiasts of all levels will find a world-class retail experience with glass from many of the top companies in the industry including Youghiogheny, Armstrong, Wismach, Kokomo, Bullseye, System 96®, Simax, TAG, and Northstar. The company is also committed to enriching the glass community through weekly workshops.

800-468-4527 630-225-3900

[edhoy.com](http://edhoy.com)



**Creative Paradise Inc.** presents a **new group on Facebook, Fusers of Cpi**, in an effort to be more proactive and aggressive on social media. This closed group page is a place where glass artists can post images, questions, and comments about their Creative Paradise molds. New mold information, exclusive news, tutorials, and helpful tips will be posted there daily. Some of the new molds that are due to be released in March 2016 include a 12" x 12" Lady of the Woods, a 6-1/2" diameter by 1" tall Patty Gray Round Dam mold, a large 8" x 13" rectangle mold, and an 8" x 8-1/5" x 1-1/2" Four Spoon Slump mold.

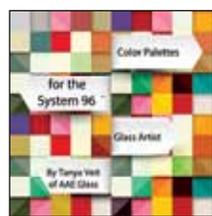
316-794-8621 [cpi@creativeparadise.biz](mailto:cpi@creativeparadise.biz)

[creativeparadiseglass.com](http://creativeparadiseglass.com)

**Olympic Kilns** presents **two new slider kilns**, the 314 Slider (25" x 25" x 13") and the 146 Slider (14-1/2" x 14-1/2" x 6"), with a sliding floor for ease in loading and glass manipulation. They come attached to heavy angle iron stands. A sleek wooden handle keeps things cool while sliding the kiln floor. The kilns come equipped with an RTC-1000 12-key digital controller or can be upgraded to the new Genesis controller, both with touch screen technology.

800-241-4400 [info@greatkilns.com](mailto:info@greatkilns.com)

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



**AAE Glass** now has the **System 96® Color Palette Book**, available only from AAE Glass. Created by Tanya Veit, this new color palette book is filled with 26 pages of design color palettes using System 96. This essential resource for any System 96 glass artist or for any artist at all has bright, vivid pictures with easy-to-read text. There is also a color wheel and color theory explanation included within the book. All book sales are final, and no returns will be accepted.

239-471-7724 [info@aaeglass.com](mailto:info@aaeglass.com)

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

**Paragon Kilns** is excited to announce its newest glass kiln, the massive **Paragon Ovation-1213**. Figured at cost per cubic foot, it is one of the company's lowest priced kilns.

## NEW Videos by Lisa Vogt



## Advanced Glass Fusing with Lisa Vogt

September 13-16, 2016

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Octopus by Jimi

A glass journal for the  
flameworking community  
[www.TheFlowMagazine.com](http://www.TheFlowMagazine.com)  
800.719.0769

Compared to smaller kilns, this 28" x 40-1/2" x 13-1/4" interior allows artists to fire large projects such as bowls or platters in one load. Artists can watch their glass projects through two peepholes or order the optional 1" x 2" glass windows. The kiln includes a heating element in the lid as well as the sidewalls for superb heat distribution and has a rugged, reliable design that is built to last. It includes dual spring-assisted lid supports to transfer the weight of the lid to a massive hinge assembly on the back of the kiln, which reduces stress on the kiln wall resulting in the long life for which Paragon kilns are famous. The Ovation-1213 comes standard with a mercury relay plus 3"-thick walls, lid, and bottom bricks, and an advanced digital Sentry 2.0 12-key controller. In addition, it uses pinless element grooves, and the long sections of wall are cemented for strength. Visit the company's website for more details on this outstanding new kiln.



800-876-4328 [info@paragonweb.com](mailto:info@paragonweb.com)  
[www.paragonweb.com](http://www.paragonweb.com)



**Wissmach Glass** has just added **fifteen colors to its 2016 Kiln Glass Catalog**. Eleven new colors in the company's 90 COE line, 90-21 through 90-31, include Crystal mixed with Yellow, White, Blue, or Green, plus a Green-Blue mix and White mixed with Gray, Red, Blue, and Green. The four new 96 COE reactive colors, 96-38 through 96-41, include Orange Red, Dark Red, Reactive Blue/Black and Oyster Pearl/Reactive Blue. Visit the company's website to find out more about these and many other fantastic offerings for the kiln

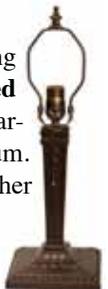
working artist.

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

**Lamp Base Specialties**, which has been serving the stained glass and lighting industry since 1974, offers **lamp bases that have a hand painted, hand buffed antique brass finish**. This handcrafting provides a rich antique brass color that varies from Antique Brass, sometimes referred to as Old English, in Dark to Medium. All of the Lamp Base Specialties bases will accommodate lamp shades from other popular construction mold systems such as H.L. Worden.

706-361-1199

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



**D&L Art Glass Supply** is pleased to offer **Bullseye's new 2016 glass and paint colors**. A full line of beautiful 90 COE opals, reactive iridized glass, frit, streamers, and rods are truly something to get excited about with spring here already and summer just around the corner. The expanded Color Line products complement the Color Line Basic Kit with new colors, a flux that adds brilliance and translucence for gloss and perception of depth, and even a paint thinner. Check out all of the Bullseye products on D&L's website.

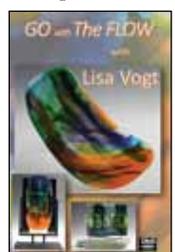
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**Lisa Vogt** presents **two new instructional videos**. *Go with the Flow with Lisa Vogt* includes



her new Free-Flow process for artful color blends that produces refreshingly new dramatic effects. This advanced, technique-driven video shows how to combine newfound concepts with traditional design to create stunning original art. In *Painting with Frit with Lisa Vogt*, the artist shows how to combine traditional design methods with gradient blends and soft washes to produce striking imagery. Both videos include bonus inserts.



[lisa@lisavogt.net](mailto:lisa@lisavogt.net)  
[www.lisavogt.net](http://www.lisavogt.net)



Gryphon Corporation has introduced a new version of its popular C-40 band saw that is designed to cut taller objects. This saw was inspired by numerous calls for a band saw capable of cutting wine bottles or other similarly sized bottles. It shares all of the features of the standard C-40 band saw, and by removing the upper guide, an additional inch of clearance is provided.

The saw can easily cut through bottles and produces a straight, smooth cut. This new saw, designated C-40 Tall, is available now.

818-890-7770 [question@gryphoncorp.com](mailto:question@gryphoncorp.com)  
[www.gryphoncorp.com](http://www.gryphoncorp.com)

Glass Accessories International, Inc. announces the first annual Glass Experience Madison (GEM) show on June 24–27, 2016, at The Vinery Stained Glass Studio in Madison, Wisconsin.



Enjoy participating in four days of art glass classes that are available for all ages and skill levels. Classes range from mixed media mosaics and stained glass to fused glass and lampworking, all taught by internationally acclaimed artist-teachers. Proceeds from the entire event will go to support the work of the Kay Bain Weiner Educational Foundation in its efforts to spread the joy of glass art to students across America. E-mail or visit the website below to sign up for classes and get more information.

[gem@accessories.com](mailto:gem@accessories.com)  
[www.kbwfoundation.com/Gem.php](http://www.kbwfoundation.com/Gem.php)



Spectrum Glass Company, with a very heavy heart, has announced that it began the process of closing its operations in May 2016 due to hard business and economic realities. Craig Barker, CEO of Spectrum, shared that the company has served the specialty glass industry for 40 years and that market factors have played the most significant role.

“Our facility was built to support product at the height of the art glass movement, but our sales never fully recovered following the Great Recession. Our consistently reduced levels of sales simply cannot cover the fixed costs required to operate a facility of our size. We would like to express our deepest gratitude to all of our partners, customers, artists, and other who have supported Spectrum Glass over the past four decades and who continue to support us now. We will continue manufacturing over the next 60 to 75 days and will continue selling the product inventory we currently have on hand over the months ahead.”

[info@spectrumglass.com](mailto:info@spectrumglass.com)  
[www.spectrumglass.com](http://www.spectrumglass.com)

Glass Patterns Quarterly presents a great Glass Expert **Glass Expert Webinars™**

Webinars™ lineup for the summer months. Included with returning favorites are two new classes on Working Solderfields with Cathy Claycomb (June 28 & 30) and Upscale Fusing with Lisa Vogt (July 26 & 28). Visit the GPQ website for more details and a complete list of upcoming Webinars.

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# Mad Etching Skills

## Jungle Tiki Etched Mosaic Table

*Design, Fabrication, and Text by Carmen Flores Tanis*



Who doesn't love a tiki? Living in Southern California, I am always stumbling onto tropical tiki images in the most unexpected places—as pillars supporting the rooflines of midcentury apartment buildings and bowling alleys, hidden in tall grass next to beach town shops and, of course, at the Enchanted Tiki Room at Disneyland. I own a collection of tiki glasses, all from the 1950s when the tiki trend was at the height of popularity. Having them perched above my sink makes dishwashing just a little more enjoyable.

This project uses three kinds of masking techniques—vinyl, rubber stamping, and embossing powder—to control the etching on the dichroic glass. If you happen to have access to a personal electronic die cutter (like a Silhouette or Cricut) or a larger plotter/cutter machine, then cutting the vinyl will be a breeze. Otherwise, you can easily hand cut the vinyl with a craft knife.

The streaky glass in this mosaic is all scrap stained glass, so you can use whatever you have in the house. I did fire the flowers to set

the paint and got a little devitrification, but I don't mind since the flowers still look fine.

I used a small table with metal legs and a 21" x 15" wooden tray top with a recessed area. Unscrew the wood tray from the table legs so that you can work more easily on the mosaic. In my table, the wood tray was already painted and sealed, so it was ready to go. If your tabletop has an unsealed wood finish, paint it with a couple of coats of acrylic paint. This will seal the wood against the moisture when we grout later.

Visit [www.glasspatterns.com](http://www.glasspatterns.com) under "Free Patterns" in the "How To" section to download the free PDF pattern. Printing it at 300 dpi will give you as pure a white for the background areas and the darkest black for the black images as possible, which is essential when etching. If you have a vinyl cutter to prepare your masking material, convert the PDF pattern to whatever format your machine uses.

### Coatings By Sandberg

*Black-Backed Smooth Dichroic Glass*

Magenta/Green, 1/2 sheet

Cyan/Copper, 1/2 sheet

### Additional Glass

Thin Black, 1 Sq. Ft.

Streaky Brown, 2 Sq. Ft.

Streaky Green, 1 Sq. Ft.

Streaky Light Green, 1/2 Sq. Ft.

Streaky Dark Green, 1/2 Sq. Ft.

Streaky Orange, 1/4 Sq. Ft.

Streaky Pink, 1/4 Sq. Ft.

### Tools and Materials

Small End Table with 21" x 15" Wood Tray with Recessed Top

Jungle Tiki Etched Mosaic Table Artwork and Pattern Sheet

Access to Electronic Die Cutting Machine/Plotter Cutter

Ring Saw Computer Glass Cutter

Breaking Pliers Alcohol or Glass Cleaner

Paper Towels etchall® etching crème

etchall® etchmask Stencil Vinyl and Transfer Sheets

etchall® Squeegee etchall® Detail Pick Tool

JudiKins Rapunzel's Flourish Rubber Stamp

JudiKins Embossing Powder Black StazOn® Ink Pad

Yellow Fine-Tipped DecoColor™ Paint Marker

Black and Orange Color Line Paints

Clear Adhesive Vinyl Shelf Paper

Scissors Craft Knife Paint Brush

Plastic Plate Protective Gloves Metal Cookie Tray

Contractors' Solvent™ All Natural Orange Cleaner

Heat Embossing Tool Tile Adhesive

Black Sanded Grout Plastic Spoon and Knife

Old Plastic Credit Card Plastic Cup for Mixing Grout

Small Sponge and Plastic Bucket Acrylic Paint

1  
*Load a sheet of etchall vinyl into the die cutting machine and cut the first tiki design, then repeat to cut the second tiki.*



2  
*Use the pick tool to "weed" or remove the excess vinyl from the cut yellow vinyl sheets.*



Whatever is exposed on the glass will be etched, so you will be removing the vinyl that corresponds to the black lines on the pattern.

Now you basically have a yellow sticker. But how to easily apply it to the dichroic glass? By making a sticker out of the sticker! Remove the backing release paper from an etchall transfer sheet to expose the adhesive.

3  
*Press the sticky transfer sheet onto the yellow vinyl and smooth it down well.*



4  
*Flip the sheets over and carefully peel away the original white paper backing of the yellow vinyl.*



The tiki should now be backwards with the sticky side up. Cool, huh?!

I found it easier to cut the dichroic glass after applying the vinyl rather than before. Use a piece of masking tape to attach one end of the transfer sheet to one end of the dichroic glass. The masking tape will act as a hinge allowing you to carefully and slowly smooth the vinyl onto the glass with one hand as you hold the other end of the transfer sheet up with your other hand.

5  
*Smooth the vinyl down well.*



6  
*Carefully peel away the transfer sheet so that the yellow vinyl design stays adhered to the glass.*



7

Trim the glass to size, then repeat for the second tiki and the second piece of dichroic glass.



Place the glass tikis on the metal cookie sheet.

8

Use the squeegee to liberally spread etchall etching crème onto the glass.



Let it sit until you can see the dichroic turn black, which will take about two minutes. *\*\*Tip:* Wear plastic gloves when working with the etching crème. (I forgot!)

Scoop the etchall back into the jar, since it can be reused. Wash the glass with lots of water, but do not remove the vinyl. Pat dry with a paper towel. You'll see that the design lines have now etched and become black. Now let's add a little more decoration to the tikis.

9

Carefully peel away the yellow vinyl so that the forehead, cheek, and chin areas are exposed.



StazOn® ink makes a nice resist if applied heavily. It lasts about 15 minutes before it starts to disintegrate under the etching cream. Lucky for us, we only need it to last about 2 minutes.

10

Ink up the rubber stamp and stamp all over the exposed dichroic.



11

Use the heat tool for a couple of minutes to set the ink.



Hold the heat tool about 6" away from the glass when you do this and keep it moving.

12

Apply another thick coating of etchall and etch again until you see the color disappear from the dichroic.



Again, it should only take about 2 minutes. Scoop up the etching cream from the glass and save for reuse. Work carefully so that you don't disturb the fragile ink underneath. Wash the glass with water. This will remove the ink. However, do not remove the yellow vinyl yet. Pat dry.

13

Note how the stamped images are etched into the glass.



Let's etch the mouth, nose and areas around the eyes one last time, but first let's protect the areas that have already been etched.

14

Apply a piece of clear adhesive shelf vinyl, sticky side down, to each tiki and smooth it down well.



Use the craft knife to cut through the clear vinyl and peel off the yellow vinyl pieces from the mouth and nose bridge on the smaller tiki.

15



Remove the yellow vinyl from the mouth, nostrils, and outer eye areas on the larger tiki.

This time we will use embossing powder as the resist. Embossing powder is a granulated plastic and makes a very effective resist when melted onto glass. It is a little trickier to use, in that you must be very careful when using the heat embossing tool so that you don't crack the glass. Now ink up the rubber stamp and stamp all over the exposed dichroic.

While the ink is still wet, sprinkle on the embossing powder, press down on the powder with your finger so that it adheres well, and tap away the excess powder.

16



The color of the powder does not matter, since we're just using it as a resist. Now very, very carefully, melt the embossing powder with the heat embossing tool. Keep the tool constantly moving. After a few minutes, you will see the granules melt and become shinier as they attach to the glass. Let the piece cool.

17

One more time, apply a coat of etching cream and let it sit for 2 minutes.



18

Remove the etching cream as before.



Not very pretty, but hold on! Time for the reveal. Carefully remove the clear vinyl and the yellow vinyl. To remove the melted embossing powder, squirt it with the orange cleaner. Let the pieces soak, then wipe them with a paper towel.

19

To make the dichroic glass really pop, fire-polish according to the firing schedule at the end of the tutorial.



Tah-Dah!!! Now use the ring saw on the fired tikis to cut out the areas where the flowers will fit and where the large tiki will adjoin the smaller tiki. Set aside for now while you print out a copy of the paper pattern.

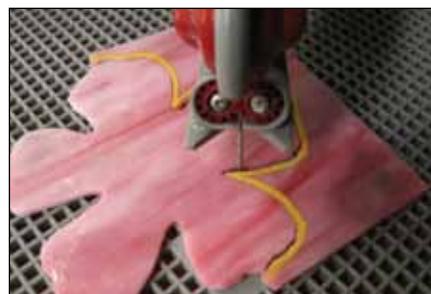
20

Cut the leaf and flower pieces from the pattern and transfer the images to the streaky glass with the Yellow DecoColor pen.



21

Cut the flowers and leaf shapes out with the ring saw.



22

Add details to the flowers and leaf shapes with the Color Line paints and fire using the schedule at the end of the tutorial.



Cut the border pieces from the brown streaky glass. I like to work using the Double Reverse Method where everything is built right side up on a temporary sticky base, then covered with another piece of vinyl and flipped over so it is face down. The backing vinyl is removed and the mosaic is flipped, face back up again, onto the tile adhesive. It's a great way to work clean and to get a smooth, flat surface.

Print another copy of the black-and-white printed pattern and tape it to a piece of cardboard. Cut a piece of clear shelf vinyl a little larger than the pattern sheet. Peel the paper backing from the shelf vinyl and tape the vinyl, sticky side up, on top of the pattern sheet.

Assemble the tikis by placing all of the cut glass pieces on the sticky vinyl.

23



Cut the black glass into 1/2" strips, then nip the strips into small triangles to use for filling in the background area of the mosaic.

24



When all the glass pieces are in place, cut another piece of clear shelf vinyl a little larger than the mosaic.

25



Peel the paper backing from the clear vinyl and press the vinyl, sticky side down, onto the mosaic. Run a craft knife all along the outside border of the mosaic to trim the top vinyl to size. This will help later on when you put the mosaic onto the tabletop.

Put a piece of cardboard on top of the mosaic and use it as a support as you flip the mosaic and vinyl sandwich over.

26



The mosaic should now be back side up.

Peel and remove what is now the top piece of clear vinyl, taking care not to dislodge any of the glass pieces.

27



Use a plastic knife to spread a thin layer of tile adhesive onto the tabletop.

28



Slide the cardboard piece from under the mosaic and place it on top of the glass. Flip the mosaic over once more so that it is dichroic side up again.

Use the cardboard to carefully slide the mosaic into the recessed part of the tabletop and press the glass into the adhesive.

29



Use a wet paper towel to wipe away any adhesive smudges from the tabletop.

Let the mosaic set for ten minutes, then carefully remove the vinyl sheet.

30



The adhesive is not dry yet, so you can still adjust the glass pieces as needed. Let dry overnight.

Mix up the grout according to the manufacturer's directions and use an old credit card as a spreader, working the grout well into all the crevices.

31



Let sit for 15 minutes. Dip a small sponge into a bucket of water and wring it out really well so that you don't add any extra water to the drying grout.

32

Use the flat side of the damp sponge to gently remove any excess grout from the mosaic.



Clean lightly, leaving a haze of grout on the glass. Let the mosaic sit one hour. You will see the grout become dull as it dries. Then use the sponge with a bucket of fresh water to finish cleaning the extra grout from the mosaic. Let dry overnight, then shine with a paper towel and glass cleaner.

Finish up by reassembling the mosaic tabletop onto the table legs. If you plan on using this table for drinks or other liquids, I would suggest sealing the grout with a grout sealer following the manufacturer's directions.

I don't know about you, but after all this work I'm thinking it's time for a nice, cool tropical drink — with a tiny umbrella and a small flaming volcano full of chips and salsa. Enjoy! **GPQ**



### Firing Schedule

Here's the schedule I used to both fire-polish and set the paint. Remember that all kilns fire differently, so you may have to make some adjustments to fit your own kiln.

- Segment 1: Ramp 300°F/hr to 1250°F and hold 10 min.
- Segment 2: Ramp 9999 (AFAP\*) to 1325°F and hold 10 min.
- Segment 3: Ramp 150°F/hr to 950°F and hold 30 min.
- Segment 4: Ramp 9999 (AFAP\*) to 700°F and hold 1 min.
- Segment 5: Ramp 9999 (AFAP\*) to 70°F and no hold.

\*as fast as possible

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*Carmen Flores Tanis is a mixed media crafter and designer who specializes in combining diverse materials in unusual and unexpected ways. She has been working with glass for over 15 years and delights in sharing her discoveries with fellow artists. She loves to make things!*

*The artist is a Designer Member of the Craft and Hobby Association (CHA) and is vice president for the Southern California Chapter of CHA. She has designed projects for Sulky, iLovetoCreate, Ann Butler Designs, Bella Crafts Quarterly, and Glass Patterns Quarterly, and is on the design teams for etchall and Smoothfoam.*

*Carmen teaches glass and crafting classes regularly at Coatings By Sandberg and the ABC Adult School as well as at Ed Hoy's International and the Glass Craft & Bead Expo. She lives in Glendale, California, with her beloved husband, Bruce. You can see more of her work and find out about upcoming classes at [madcraftskills.com](http://madcraftskills.com) and [forestanisstudio.com](http://forestanisstudio.com).*



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# Golden Koi

## Fused Glass Mosaic with Depth

*Design, Fabrication, and Text by Wesley R. Wong*



**T**he koi fish, an ornamental carp and a common symbol in Chinese culture and feng shui, is one of my favorite subjects to make with glass. The oldest legend of the koi fish dates back to the Chinese philosopher Confucius, who was presented a black carp as a gift from King Shoko of Ro. According to the legend, all modern koi and their bright colors are descended from that black carp.

The Chinese raised the koi in their rice paddy fields for food, especially during the long winter months, and passed on their

knowledge to the Japanese. Raising the fish in ponds began in Niigata, Japan, during one particularly harsh winter, during which Japanese farmers could not fish or sustain any crops. As the farmers raised the koi in ponds to feed their families, they began to notice different color mutations on the skin of the newly bred koi. They carefully chose the most beautifully colored fish and bred them in separate ponds to keep as family pets. Today, there are over 100 different color variations of koi fish.

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- 200SF White Opal Glass, 4" x 4"
- 210-71SF Ivory Opal Glass, 6" x 8"
- 230-71SF Hydrangea Opal Glass, 6" x 6"
- 233-75SF Mariner Blue Opal Glass, 6" x 6"
- 230-72SF Medium Blue Opal Glass, 4" x 4"
- 132SF Light Blue Transparent Glass 6" x 5"
- 60-005-96 White/Clear Streaky Glass, 10" x 9"
- 60-7550-96 Fern Green/Clear Streaky Glass, 10" x 5"
- 12-424-96 Cobalt Blue Streamer Bits Glass, 10" x 8"
- 1009SF Black Opal Glass, Scrap
- 151SF Cherry Red Transparent Glass, Scrap

### System 96® Frit

- F1-171-96 Orange Transparent
- F1-5333-96 Deep Aqua Transparent
- F1-2206-96 Dark Green Opal
- F1-2335-96 Mariner Blue Opal
- F3-2602-96 Yellow Opal

### Additional Glass

Clear Dichroic, Scrap

### Tools and Materials

- Metallic Copper Glassline Paint
- Spectrum Papyros Kiln Paper
- ZYP Boron Nitride Mold Release Spray
- Creative Paradise 8" x 10" Patty Gray Dam Mold
- Clear School Glue 1/8" Fiber Paper
- 1/4" Fiber Paper Glass Cutter
- Grinder Breaking Pliers Scissors
- Tweezers Wheeled Mosaic Nipper
- Permanent Marker Plastic Spoon
- Dental Pick Safety Glasses
- Dust Mask or Respirator Kiln Shelf Strips
- Liquid Pump Hair Spray
- Carbon Paper or Light Table
- Thin Metal File or Emery Board

This project is a double-sided fused glass mosaic with lots of depth and dimension that comes from combining the techniques of mosaic art with the world of fused glass. Sandwiching two layers of clear glass between the background and foreground layers achieves depth in the piece.

Some elements of the design are adopted from the Creative Paradise Koi Pond texture mold. The koi appears to be swimming under the lily pads and lotus flower. To achieve this illusion, the background design contains opaque glass with transparent frit, while the foreground design contains transparent glass with opaque frit. I first learned about this technique in one of Patty Gray's advanced fusing classes many years ago, where she had a sample piece with an abstract design. I have expanded on this technique by adding *andamento*, the visual flow and direction within a mosaic produced by how the rows of tesserae are placed. I also elevated some of the fused elements for added dimension.

The background design is assembled as a mosaic on a sheet of clear glass, and the gaps are filled with powdered frit. It is fired to a full fuse and placed front side down into the Patty Gray dam mold. The foreground design is assembled as a mosaic on another sheet of clear glass, and the gaps are filled with powdered frit. Elevated portions of the design are supported with fiber paper. The foreground layers are placed in the dam mold on top of the background layers for a total of four layers of glass.

The entire assembly is fired to a contour fuse to retain the texture of some of the foreground elements. Ceramic damming strips can be used in the second firing of the four layers, but I have found that smoother edges are produced with the Patty Gray mold, which means that the edges will not require cold working. The background and foreground designs can also be made into two separate fused glass mosaic or traditional mosaic pieces.

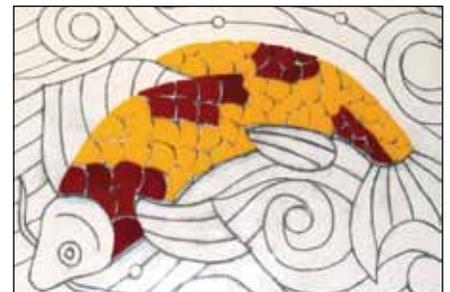
1



*Prepare the pattern.*

Number the scales in the koi pattern and decide which scales will be red and which will be marigold. Cut the scale pattern in groups of 2 or 3 and trace the pattern pieces onto the glass with a permanent marker. This should speed up the glass cutting and minimize any waste.

2



*Assemble and attach the colored scales to the clear glass.*

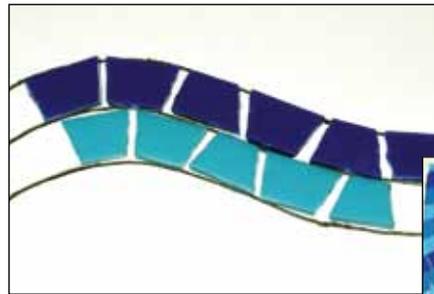
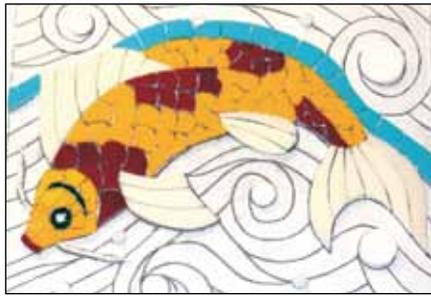
Cut and clean an 8" x 10" sheet of clear glass and place a copy of the koi pattern under the glass. Assemble and attach all of the scales to the clear base glass leaving a small gap between the pieces. Apply tiny dabs of clear glue to the corners of the pieces when gluing them to the base glass. Excessive amounts of glue may produce air pockets resulting in bubbles between the glass.

3



*Cut and glue the fin pieces to the clear base, then nip small pieces of the black and white glass to fill in the details of the face, lips, and whiskers.*

4  
Cut and glue the white bubbles and fill in the background with the various shades of blue glass.



5

To fill in the curved lines in the background, cut the glass into strips of various widths from 3/8" to 5/8" and nip them into keystone shapes to fit around the curves of the design.



The background should have alternating shades of blue glass when completed.

6  
Spoon some of the Transparent Orange powdered frit onto the fish body and fins.



Smooth the frit into the gaps between the glass with your index finger, working in a circular motion. Be sure to *always* wear a dust mask or respirator when working with frit.

Fill in the background gaps with the Transparent Deep Aqua powder in a similar manner by smoothing it along with your index finger. The colors may blend in the areas where the two powders meet. As you approach the edges of the mosaic, place a finger of your other hand along the edge to block the powder as you work it into the gaps at the edge of the glass. Brush off any excess powder on the surface of the glass with your finger. Do not use a paintbrush to remove the excess, because some of the powder in the gaps may be removed as well.

7  
Place the assembled piece onto a prepared kiln shelf or shelf paper and fire it using the suggested full fuse schedule.



You may need to adjust the schedule to fit your own particular kiln.

#### Full Fuse Schedule

Segment 1: Ramp 300°F/hr to 400°F and hold 10 min.  
Segment 2: Ramp 350°F/hr to 1460°F and hold 10 min.  
Segment 3: Ramp 9999 (AFAP\*) to 950°F and hold 90 min.  
Segment 4: Ramp 150°F/hr to 600°F and hold 15 min.  
\*as fast as possible

8  
Prepare the 8" x 10" Patty Gray dam mold by spraying the inside surface of the mold with several coats of ZYP Boron Nitride Mold Release spray.

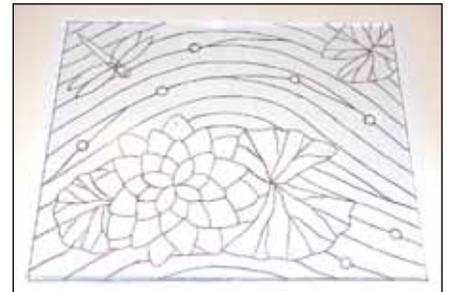


Make sure that the interior walls of the mold are thoroughly coated. Let the mold dry completely.

Cut an 8" x 10" sheet of Papyrus paper and place it inside the dam mold. After the koi mosaic has been fired and cooled, flip it around so that the fish is now swimming toward the right and place the mosaic into the prepared dam mold. Grind the edges and corners of the fused mosaic as needed to fit the mold.

Cut an 8" x 10" sheet of clear glass and round out the corners with a grinder. Check the fit of the clear glass in the dam mold on top of the fused mosaic. Grind the edges of the clear glass as needed to fit into the mold. Remove the clear glass from the mold.

9  
Clean the clear glass and place it over a copy of the lily pad pattern sheet.





On this Bead & Jewelry CD you'll find a collection of fifty-two bead and jewelry projects in PDF format. These articles are selected from over twenty years of *Glass Patterns Quarterly* archives.

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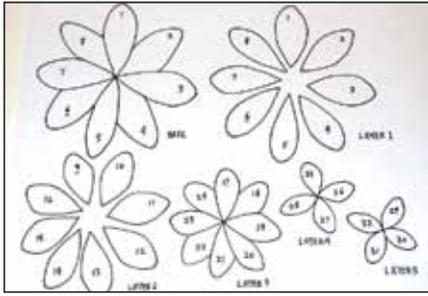
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✓ it out!

Trace the individual petals of each layer of the lotus flower pattern using carbon paper or a light table.

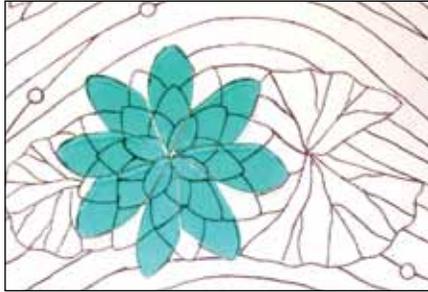
10



Extend the petals beyond what is visible in the pattern sheet and number each of the petals.

11

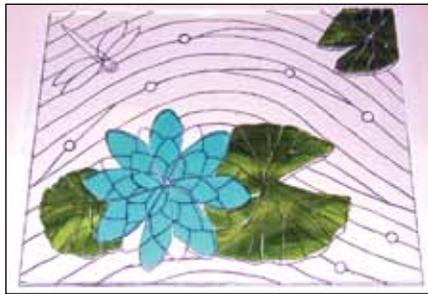
Cut and glue the Light Blue Transparent glass for the base of the lotus flower.



This blue base layer is a placeholder to support the lotus flower, which is assembled in a later step.

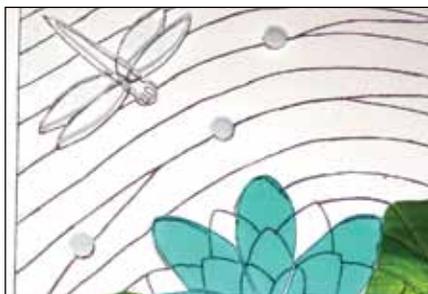
12

Cut and glue the Green Streaky Transparent glass for the lily pads.



13

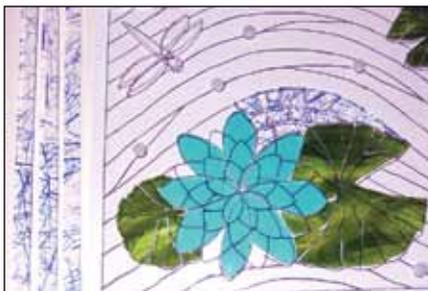
Cut and glue the base layer for the dragonfly body and wings from some clear scrap glass.



This clear base layer is a placeholder to support the dragonfly, which is assembled in a later step. Also cut and glue some round circles cut from the White Wispy glass for the small bubbles.

14

Cut the Blue Streamer Bits glass into strips of various widths between 3/8" and 5/8" and nip the strips into small keystone-shaped pieces.



Glue the pieces along the curved lines in the background and leave a small gap between the pieces. Let the glue dry completely before proceeding to the next step.

15

Fill in the gaps for the lily pads, lotus flower, background, and dragonfly base.



Fill in the gaps in the lily pads and lotus flower base with the Dark Green powdered frit and fill the background and dragonfly base with the Mariner Blue powdered frit. Smooth the powdered frit with your index finger and remove any excess powder from the glass surface. Mist the glass with the pump hair spray to set the powdered frit.

16

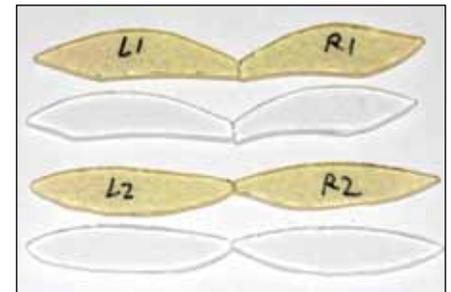
Cut and glue the Red Transparent glass for the dragonfly body and the small clear spacer pieces next to the body.



Fill in the remaining spaces on the wing base with the 1/8" fiber paper, which is used to elevate the wings.

17

Cut two sets of dragonfly wings—a Straw Iridized layer for the top, and a clear layer for the bottom—and glue the two layers of the wings together.

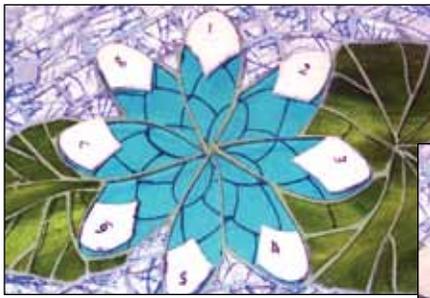


18

Draw vein lines on the wings with the Metallic Copper Glassline paint.



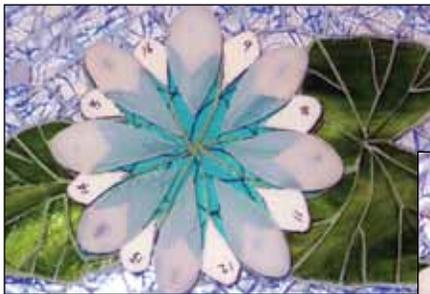
Let the paint dry completely and glue the wings onto the body. Add the white eyes and body details with chips of clear dichroic glass.



19

Cut wedge-shaped pads from the 1/8" fiber paper and glue them onto the outer petals of the lotus flower base.

The fiber paper will elevate the petals and add dimension to the lotus flower. Cut and glue the first level of petals to the fiber paper pads.



20

Cut wedge-shaped pads from the 1/4" fiber paper and glue them between the first-level petals of the lotus flower.

Cut and glue the second-level petals to the fiber paper pads.

21  
Cut wedge-shaped pads from the 1/8" fiber paper and glue them between the second level petals of the lotus flower.



22  
Cut and glue the third and fourth levels of petals.



Cut wedge-shaped pads from the 1/8" fiber paper and glue between the fourth level of petals.



23

After cutting and gluing the top level of petals, add a small pile of yellow medium frit to the center of the petals.

Apply a mist of hair spray to set the frit.

24  
Stack and center the assembled lily pad panel on top of the fused koi panel that is already in the dam mold.



Place the mold in the kiln, elevate the mold with a couple of kiln shelf strips, and fire using the following suggested contour fuse schedule. You may need to adjust it to fit your own particular kiln.

#### Contour Fusing Schedule

Segment 1: Ramp 125°F/hr to 300°F and hold 30 min.

Segment 2: Ramp 150°F/hr to 1220°F and hold 60 min.

Segment 3: Ramp 150°F/hr to 1360°F and hold 10 min.

Segment 4: Ramp 9999 (AFAP\*) to 950°F and hold 2 hrs.

Segment 5: Ramp 150°F/hr to 600°F and hold 1 min.

\*as fast as possible

25  
Remove the fused mosaic from the dam mold, carefully scrape away any fiber paper residue, and remove any sharp edges.

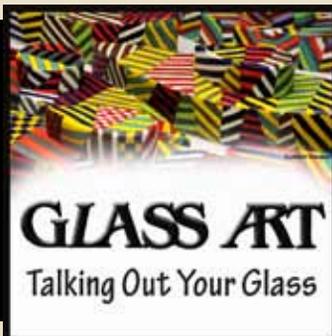


Use a dental pick and tweezers to remove any fiber paper left on the dragonfly and lotus flower. Then gently remove any sharp edges from the dragonfly wings and the lotus flower petals with a thin metal file or emery board. Take care to not scratch the glass.

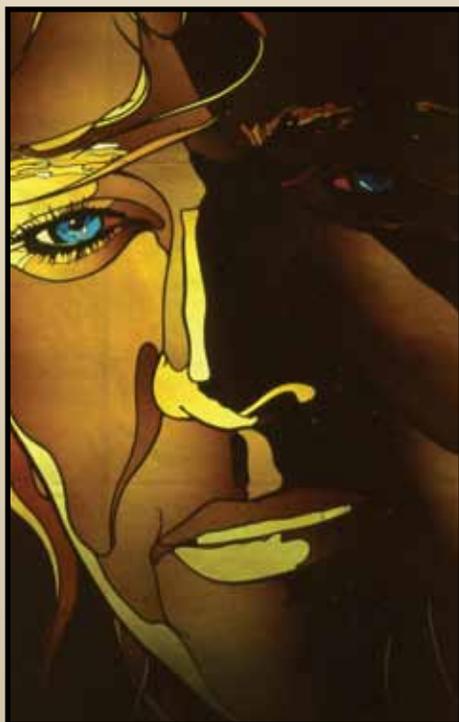
The completed fused mosaic should have smooth, matte-finished beveled edges from the dam mold. If you prefer polished edges, you can cold work the edges with a lap grinder or a belt sander.

This piece displays well in a metal stand. Shining a light behind the mosaic will accentuate the rich colors of the glass. **GPQ**

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**See the May/June 2013 issue of *Glass Art* for the accompanying article on Narcissus Quagliata. For back issues and subscriptions, visit [www.glassartmagazine.com](http://www.glassartmagazine.com).**

*Wesley R. Wong is an award-winning artist who designs and produces custom glass art from his studio in San Jose, California. His passion for glass started in 1981 with stained glass, which eventually lead him into mosaics and fused glass. His work features lots of bright colors and intricate patterns and has been exhibited in many juried glass and mosaic shows throughout the United States.*



*Wesley enjoys sharing his glass knowledge with other artists and teaches glass workshops through his studio and at the Institute of Mosaic Art in Berkeley, California, and the Stained Glass Garden. He is a member of the Association of Stained Glass Lamp Artists (ASGLA), Society of American Mosaic Artists (SAMA), and Contemporary Mosaic Art (CMA).*

*Visit Wesley's studio website at [www.glasstastique.com](http://www.glasstastique.com) to view more of his work. For information on workshops, you can contact him by e-mail at [glasstastique@gmail.com](mailto:glasstastique@gmail.com).*

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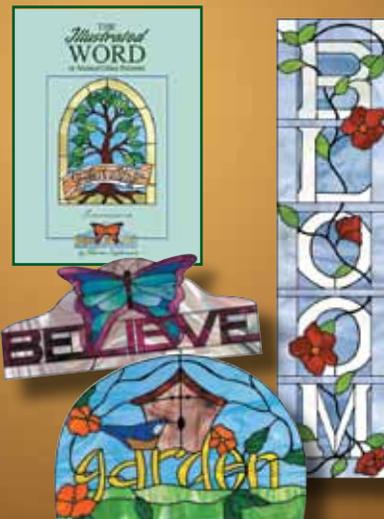


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# Wisteria Bowl

*Design, Fabrication, and Text by Kelley Mc Hugh*

**W**isteria is a beautiful, fragrant flower that grows in vines and can be seen creeping up brick walls or trellises. The name for this unmistakably lavender flower has been used to describe paint colors, bridesmaid dresses, and fingernail polish. Now you can make this lovely dimensional slumped wisteria bowl to use when you are entertaining during the summer months. This tutorial uses glass frit and two unique Patty Gray molds by Creative Paradise, Inc.

Begin by treating the GM126 ceramic dam mold with a glass separator spray in a well-ventilated area. We recommend ZYP Brand Boron Nitride Spray. Several light coats with a short waiting period between coats are preferable to one heavy coat. Shake the can well before use and hold it upright while spraying to assure proper distribution of the product. It is important to turn the mold to make sure you coat it at all angles.

Also make sure that you have your respirator or dust mask ready to use before you begin to fill the mold. This is an essential piece of equipment whenever you work with glass frits and powders to avoid inhaling any glass particles.

## **Creative Paradise, Inc.**

GM126 Patty Gray Large Round Dam Mold  
GM162 12" Patty Gray Dam Mold  
GM125 Slumping Mold (optional)

## **Tools and Materials**

Kiln Shelf Paper  
ZYP Boron Nitride Mold Release  
Respirator or Dust Mask



## **System 96® Sheet Glass**

210-72SF Almond Solid Opalescent  
CN-30-96 Confetti Glass Forest Green

## **System 96® Frit**

F1-1108-96 Medium Amber Transparent  
F1-5333-96 Deep Aqua Transparent  
F2-2264-96 Amazon Green Opal  
F2-528496 Olive Green Transparent  
F3-2103-96 Vanilla Cream Opal  
F7-2301-96 Hydrangea Opal  
F7-2103-96 Vanilla Cream Opal  
F7-774-96 Ming Green Irid  
F7-1308-96 Pale Blue Opal

## **Additional Glass**

Black Vitrograph or Candle Bent Stringers

1

*Cut a 10" circle out of kiln paper and place it in the mold.*



The kiln shelf paper will act as a buffer so the air can escape from under the glass. This is an important step in using ceramic dam molds with glass.

2

*Cut a 10" circle out of the Almond sheet glass and place it on the kiln shelf paper in the mold.*



*Cover the Almond circle in the mold with F7 mosaic-size pieces of Vanilla Cream Opal glass and F3 Vanilla Cream Opal medium frit.*

3



System 96® Vanilla Cream Opal changes during firing as it reacts to other colors of glass that contain copper. In areas where the Pale Blue and Ming Green are in contact with the Vanilla Cream, the Ming Green and Pale Blue convert to different colors that almost have a red tint, which will make your piece very unique!

4

*Place F7 Hydrangea and F7 Pale Blue in a vertical arrangement to create the Wisteria flowers.*



5

*Add some F7 Ming Green Irid along the top of the Wisteria in a horizontal line.*



6



*Sprinkle some F2 Fine Amazon Green Opal and Fine Olive Green Transparent frit in the section of the piece that will be over the tops of the wisteria.*



*To create the appearance of leaves, place pieces of the Forest Green Confetti glass on and around the top of the flowers.*

7



*Place F7 Clear frit in the dam over all of the other frit until it is about 1/2" deep.*

8



The dam should be holding approximately 64 oz. of frit.

*Sift some F1 Medium Amber powder into random areas of the section that will be on top of the flowers and F1 Deep Aqua onto random areas that will be below the flowers.*

9



*Place some black vitrigraph stringers or stringers bent with a candle here and there on the piece.*

10





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# 12

*Slump to  
create a bowl  
shape using the  
GM125 mold  
and recommended  
slumping schedule,  
if desired.*



### Slumping Schedule

Segment 1: Ramp 250°F/hr to 1215°F and hold 60 min.

Segment 2: Ramp 9999 (AFAP\*) to 950°F and hold 120 min.

Segment 3: Ramp 100°F/hr to 300°F and no hold.

\*as fast as possible

GPO

### Comparing Firing Schedules

Before using any firing schedule, take a moment to compare the temperatures in the new firing schedule to the firing schedule you have already used successfully in your own kiln. If you find that the top temp of the schedule provided here is much hotter than the full fuse firing schedules you have previously used in your kiln, by all means adjust the temperatures down in this new firing schedule.

Many kilns fire hotter or cooler than the kiln readout indicates. If the firing schedule you use in your kiln full fuses two layers of glass that are at least 4" x 4" with a ramp of 275°F per hour and top temp of 1450°F, for example, you will need to take 15°F off of each segment in the firing schedule given.

**Note:** If a kiln fires too hot, the glass separator can fail and the glass and molds will be ruined. Familiarize yourself with your kiln by running a series of tests and recording the results. Visit the tutorial section on the Creative Paradise website at [www.creativeparadiseglass.com](http://www.creativeparadiseglass.com) for more information and firing notes.

# 11

*Fuse the piece.*



To create a finished piece with some textural surface, fire your piece using the firing schedule below. If you would like to create a smooth, fully fused surface on the glass, raise the temperature in Segment 4 to 1470°F.

### Texture Fuse Firing Schedule

Segment 1: Ramp 275°F/hr to 1215°F and hold 45 min.

Segment 2: Ramp 50°F/hr to 1250°F and hold 30 min.

Segment 3: Ramp 275°F/hr to 1330°F and hold 10 min.

Segment 4: Ramp 350°F/hr to 1445°F\*\* and hold 10 min.

Segment 5: Ramp 9999 (AFAP\*) to 950°F and hold 120 min.

Segment 6: Ramp 100°F/hr to to 300°F and no hold.

\* as fast as possible

\*\* raise temperature to 1470°F for a fully fused surface

After your piece has been fired, let it cool.



*Kelley Mc Hugh earned her degree in journalism from Griffith College in Cork, Ireland. She has lived in the Middle East, Ireland, and England, and now resides in Kansas.*

*Kelley is the social media and website content manager for Creative Paradise, Inc., and helps to create projects and write tutorials using Creative Paradise molds. Visit [www.creativeparadiseglass.com](http://www.creativeparadiseglass.com) for more tutorials and important firing notes.*

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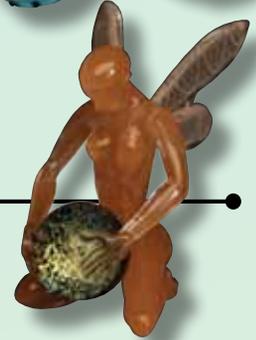
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**Lisa Vogt**

*Fusing with Frit* July 7



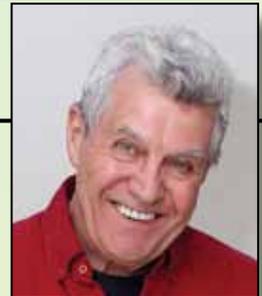
**Michael Dupille**

*Beginning Fritography* July 14



**New** **Lisa Vogt**

*Upscale Fusing* July 26 and 28



**Dennis Brady**

*Master Glass Artisan Lecture Series* August 18



**Gil Reynolds**

*Flow Bar and Advanced Pattern Bars* August 23

**Denny Berkery**

*The Copper Foil Method* August 25



**New** **Lisa Vogt**

*Creative Slumping* August 30 and September 1



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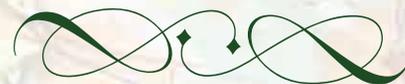
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# Splendor in the Utopian World

*Design and Text by Randolph Raum*



Ornament is a big part of stained glass design and a favorite of people who want to decorate their homes or other spaces. There is such a strong need for it, and one wonders why traditional decorative is chosen when there is so much natural imagery that expert design, glass selection, and effects can render very well.

It seems the answer is that ornament asks nothing of the viewer except, "Look at me; I'm so pretty." There is no intellectual challenge, just a soothing background visual that dresses up a space. Leaded glass in most instances is going to do this with bevel accents and textured clears or colors, but to get that "wow," there is nothing like intrinsic detail and a good mixture of custom bevels and good background glass choices. Those can be found in this 30-1/2" x 30-1/2" panel with its 28-1/2" x 28-1/2" bevel cluster.

The design can be stripped down to basics like a border and a diamond in the middle, and it will be a success. However, packing the area with concentrated design and taking the background glass down a value and letting the clear glass bevel come out will make it a great project. There is a lot to argue about with different styles and philosophies of glass design and execution, but still, whenever a truly well designed decorative panel stands out, it usually possesses fine detail and good glass selection.

Action Bevel is trying to make some of that traditional decorative design available through a new beveled glass cluster, the 6mm TILE-114. It comes in 1/4" 6 mm glass with a thinner edge for a steeper, brighter bevel. Visit [www.actionbevel.com](http://www.actionbevel.com) to order bevel clusters, research designs, or inquire about custom design services.

**GPO**

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5NLL Purple/Amber/Blue for Center Background, 8 Sq. Ft.

## **Wissmach**

EM50 Dusky Rose for Border, 5 Sq. Ft.

## **Action Bevels**

TILE-114

## **Tools and Materials**

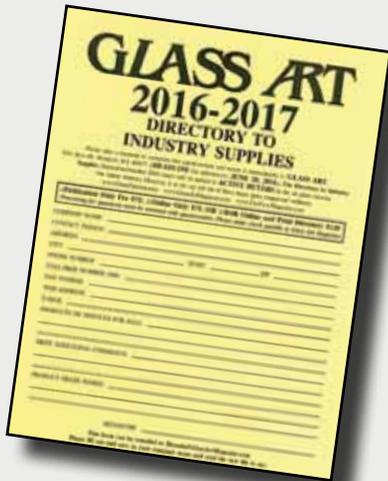
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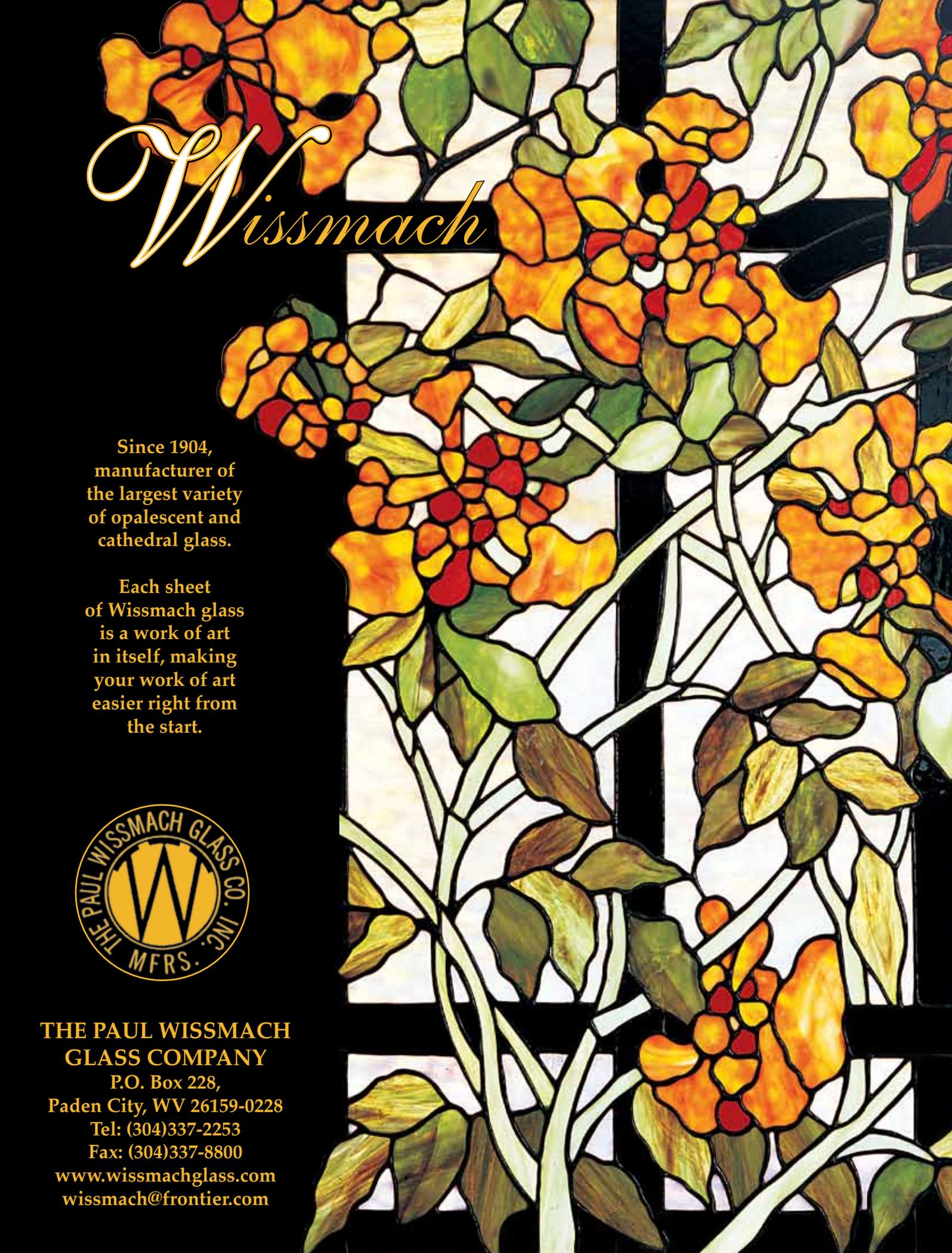
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