

Project Guide

Ant Picnic Dish

Glass Cutting: **simple straight cutting/nipping**

Firings: **full fuse, tack fuse, slump**



Step-by-Step

1. Begin with 8-inch 100SFS Clear Project Base.
2. Cut 1-5/8-inch squares:
16 squares of 226-74SF Amazon Green
15 squares of 200SF White Opal
3. Place all 16 green squares and 12 white squares on base, alternating colors in checkerboard pattern. (Allow squares to overlap edge of base.) Leave outermost triangular "points" empty temporarily. When layout is complete, mark edges of overlapping squares with marking pen, then trim each to fit flush with edge of base.
4. Four small triangular "points" can be filled with each remaining square. Just place one corner of an unused square into position, then mark and trim to fit. Repeat to fill remaining sections.
5. Full fuse.
6. Create ant from 3 black Pebbles and black stringer nipped and glued in place as shown.
7. Tack fuse.
8. Slump into 8" square mold



Materials We Used

Base: 8-inch Clear

Glass Colors: 226-74SF Amazon Green, 200SF White Opal

Pebbles: Black

Stringers: Black

Variation — Wild Cherry Dish

Build on a 10-inch Clear Base, using 2-inch squares of 200SF White Opal and 210-72SF Almond Opal. Decorate as shown with red Pebble cherries, transparent green leaves and bent Stringer.





Project Guide

BasketWeave ■ decorative platter

Glass Cutting: **simple, straight cuts**

Firings: **full** or **contour fuse, slump**



Step-by-Step

1. Build this platter directly on a kilnshelf covered with Thin-fire paper since it has no solid base layer.
2. Select your slumping mold and measure. For a 12" square platter, use glass quantities at right.

For other mold sizes, add length+width of your mold and select that quantity of Strips in your chosen color palette.
(An 8x8" platter = 16 Strips; a 10x12 platter = 22 strips).

3. For 12" square platter, use full-length Strips. For other mold shapes, cut Strips to the measurements of your mold. Remember there will be two different Strip lengths for a rectangular mold.

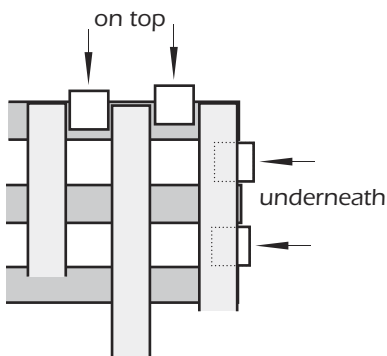
4. Using one Strip as a guide, place parallel Strips alongside, leaving about 1/2" between each strip. Even-out the spacing and mix the colors any way you like.



5. Place a pinpoint of glue 1/4" from the right side of each parallel Strip, and carefully place your guide Strip on top. Repeat on the left side, adding another Strip on top.

6. Evenly space the remaining Strips between the two side Strips, using pinpoints of glue in several spots to secure each one.

7. All around the perimeter, wedge a clear Chip into the spaces between each Strip:



Materials We Used

Strips: For a 12" square platter, select 24 strips in the color palette of your choice.

Example: 8 each violet, sky blue, pale purple, pale blue.

Chips: 44 clear

Note:

Chips = 1/2" glass squares

Strips = 1/2 x 12" glass strips

Keys to Success

This project benefits from the synergy of **transparent** colors: wherever colors cross, a third color is created.

A **Contour Fuse** will meld the separate Strips together nicely. A **Full Fuse** will "magically" create a network of empty circles, due to the tendency of glass to round when melted.



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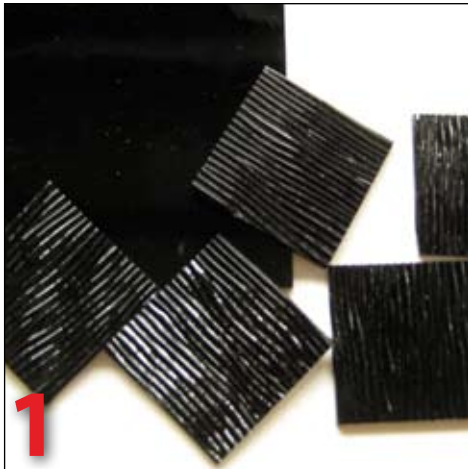
Black Cord Quilt

Glass Cutting: **simple straight cuts**

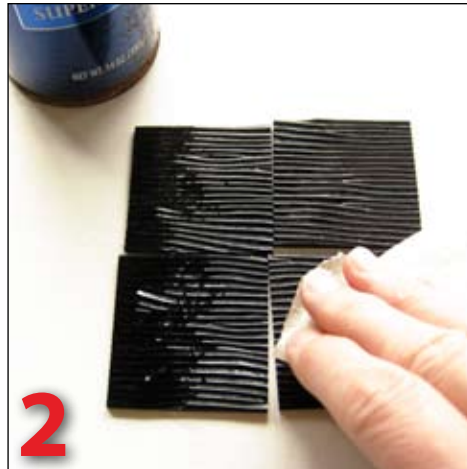
Firing: **full fuse, slump**



The texture in Black Cord creates an organic woven look in this easy project.



1 Cut sixteen 2-inch squares from Black Cord. (Always cut a textured glass on the smooth side.)



2 Working with several squares at a time, spray the the textured side with hairspray* and quickly wipe only the ridge tops with a damp paper towel.



3 Lightly sprinkle your first color of fine opal Frit into the valleys of the texture on 8 of the squares.



4 Pat down the Frit with the end of a brush or similar tool to expose the ridges. Spray again with hairspray to hold. Repeat steps 2-4 using your second color of Frit.



5 Place Frit-topped squares onto base, alternating the color and grain of each as shown. Top with 2-inch Clear squares (if desired) for added depth. Full Fuse, Slump.

Materials We Used

Base: 8-inch Black Square

Frit: Fine Almond Opal and Medium Blue Opal

Clear (if desired)

***Hairspray:** choose a cheap one without conditioners or fragrance in a pump spray bottle. (Pumps have less overspray than aerosols.) Hold 10-12 inches from surface for best results.

Tips & Tricks

This technique requires the use of OPAL Frit to show against the Black Cord!



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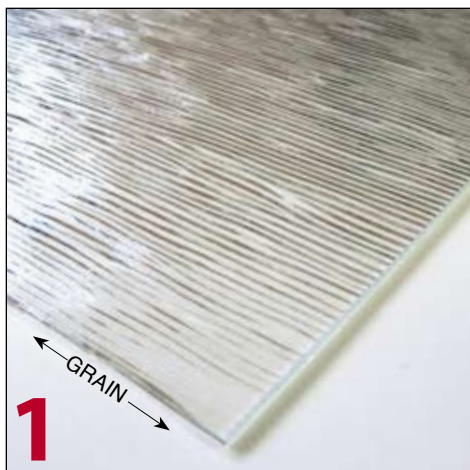


Bubble Basics

Glass Cutting: **simple straight cuts**

Firing: **contour fuse. slump**

Trapped bubbles add a unique interest to a project!



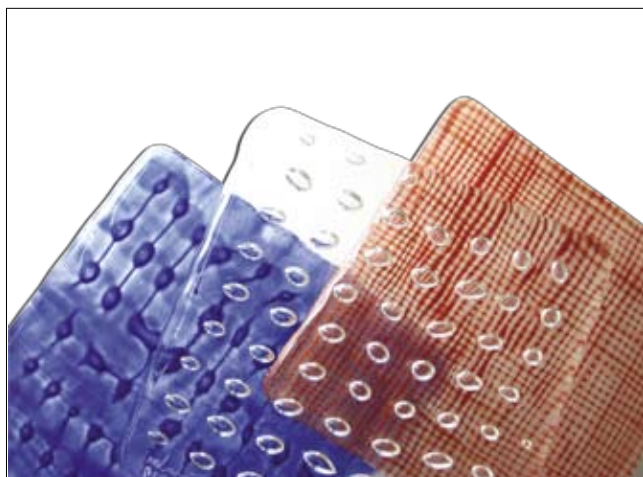
Cut 2 equal squares of a Clear textured glass. (100CSF Chord or 100RSF Ripple). Lay the first square on Kiln Shelf Paper, **texture side up**.



Lay the second square on top of the first, **texture side down**. Turn the second square 90° so that the texture grains "crisscross."



Decorate any way you choose & fuse. We used Pebbles, Chips, and Stringer. We Contour Fused (1425° for a 5 minute hold).



Large bubbles are created with Ripple, smaller ones with Chord. Frits and paints can be used to fill in or accentuate the textures as shown here in experimental tiles by Janet Zambai.



Project Guide

Bugs! • garden or planter decor

Glass Cutting: **simple curves**

Firing: **tack fuse**

Accessories: **alligator clip, small brass rod**



Step-by-Step

1. With a marker, draw a “bug body” onto the glass and, if making Bee project, the “wings-shape” onto the clear glass (see template).
2. Cut out body and wing shape (if making Bee).
3. With pinpoints of glue, affix the Bee body on top of the wings-shape.
4. “Randomize” the edges of a Strip with the nippers, to create Ladybug head or Bee’s stripes. Shorten as necessary and affix with pinpoint of glue.
5. Bee’s wings: spread some Klyr-fire onto the wings to hold small pieces in place. Break white Stringer into pieces and place on the wings. Then sprinkle some clear iridescent Frit over the top. Remove any stray Frit from the bee body with a small brush.

6. Details

Bee: Select a piece of coarse Marigold Frit for each eye. Affix with a pinpoint of glue.

Ladybug: Nip black Rod into 1/8” lengths for Ladybug spots. Stand on end and affix with a pinpoint of glue. Add black Stringer down center of Ladybug back.

Materials We Used

Bee

Strips: black

Glass Colors: clear, yellow opal

Frit: clear irid, coarse marigold

Stringer: white

Ladybug

Strips: black

Glass Colors: opal red

Rods: black

Stringer: black

Keys to Success

A Tack Fuse will give greatest **dimension** and interest to a project like this.

Note:

Strips = 1/2” x 12” glass strips

Technical Tip: Nibbling Nippers

When using the glass nippers, it’s best to “nibble” away at the glass edges a little at a time. This gives maximum control, is easy on the hands, and prevents large pieces from flying around the room. You can always nip off a little more if needed. **AIM YOUR NIPPERS** so that the nipped-off pieces will land in a container.



Project Guide

Bugs! • (page two)

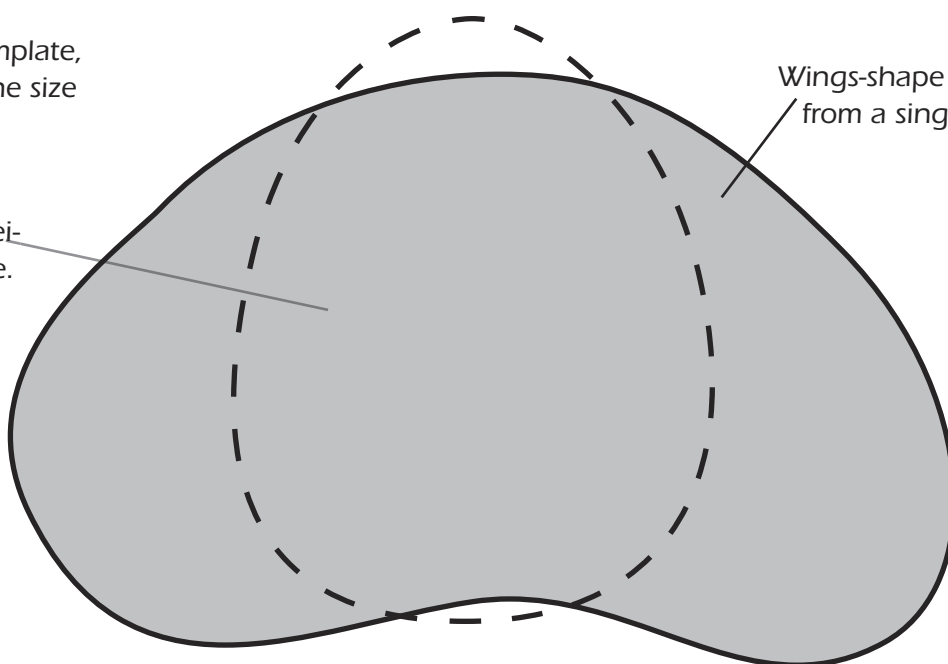


Cutting template

- Enlarge or reduce this template, or re-draw freehand for the size project you want.

Use body shape for either Lady bug or Bee.

Wings-shape is formed from a single piece.



Mounting Instructions

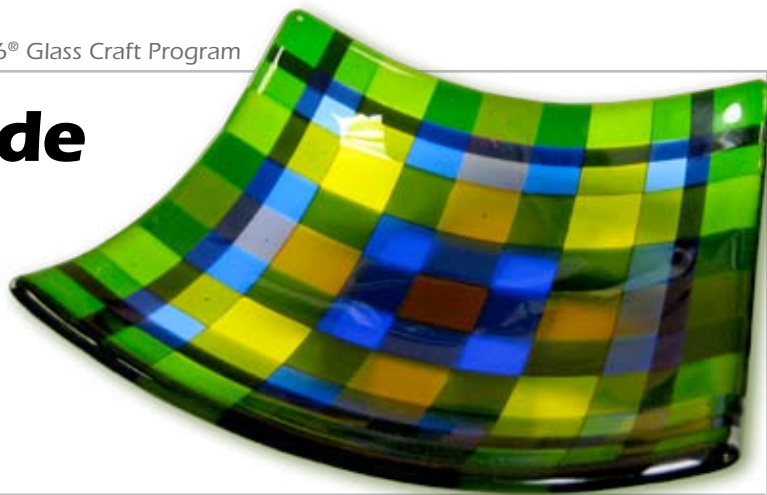
1. After firing, affix an "alligator clip" onto the back of the fused Bug using plenty of E-6000.
2. After the adhesive dries, either clip the Bee wherever you like him, or insert a small rod into the hole in the alligator clip to serve as a stake.





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Project Guide



Classic Plaid

Glass Cutting: **straight strip cutting**

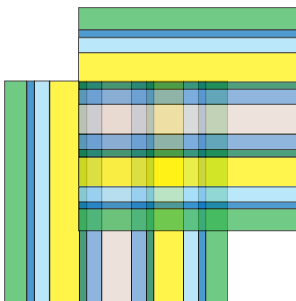
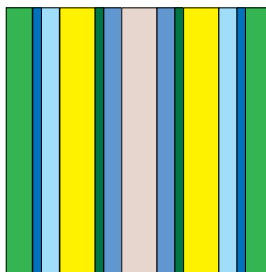
Firings: **full fuse, slump**

Step-by-Step

1. Build this project on a Portable Assembly Surface* or directly on your kiln shelf. Cut the following 8-inch strips:

Width	Color	Number
1-inch	591-1SF Champagne	2
1-inch	161SF Yellow	4
¾-inch	526-2SF Moss Green	4
½-inch	130.8SF Pale Blue	4
½-inch	132SF Light Blue	4
¼-inch	538-6SF Navy Blue	4
¼-inch	125SF Dark Green	4

2. Divide the strips into two equal sets and lay them out according to the pattern at right.
3. Layer 2 is identical to Layer 1, just turned 90° before stacking on top of the first. Note: Because the accuracy of strip cutting can vary, measure against the width of layer one (pressed tightly together) then trim the lengths of Layer 2 if necessary.



4. Full Fuse.
5. Slump.

Materials We Used

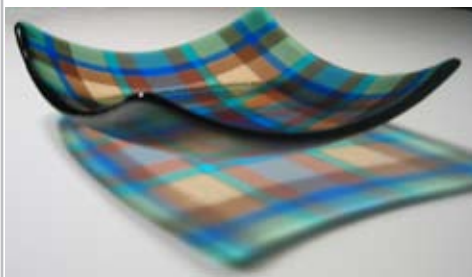
Glass Colors: see chart

Note:

***Portable Assembly Surface**
= an unglazed ceramic tile used to support a project that has no Blank

Keys to Success

- This project benefits from the synergy of transparent colors: wherever colors cross, a third color is created. Because of this, lighter colors tend to work best.
- Precise cutting: take your time — it will pay off!
- Take a last peek at your plaid before closing the kiln — square it up if necessary.



Light streaming through a plaid design

Note: main project picture varies slightly from pattern provided.

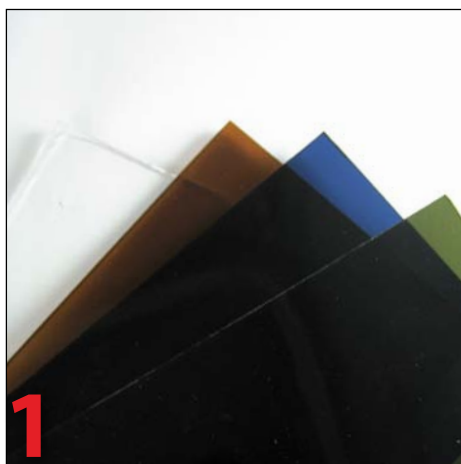
Project Guide

Color Tint Technique

Glass Cutting: **Straight lines**

Firing: **Full fuse, slump**

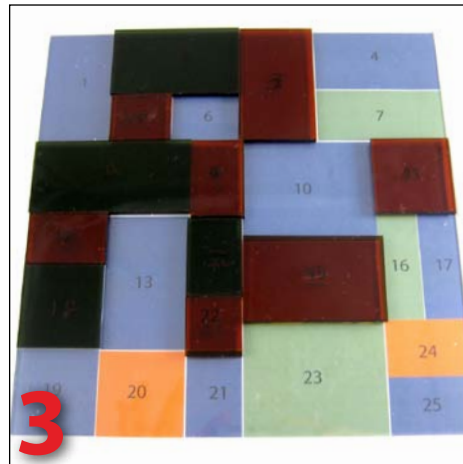
This simple technique reminds us of making "sun prints" on photosensitive paper. As Clear glass sinks into the color beneath it, lighter "tints" of the glass color are created, making it a great way to utilize some of the beautiful darker colors in the System 96® palette.



1 Begin with an 8" x 8" Clear Base, a 4" x 6" piece of 528-4SF Olive Green, a 4" x 6" piece of 111SF Dark Amber, a 4" x 8" piece of 538-6SF Navy Blue, a 6" x 6" square (or the equivalent) of Clear glass, plus an 8.5-9" square of Papyrus™ Kiln Shelf Paper.



2 Using the Cutting/Layout Guide on pages 2, trace all cutting lines onto each of the 3 colors of glass. Number each section. Score and break all pieces.



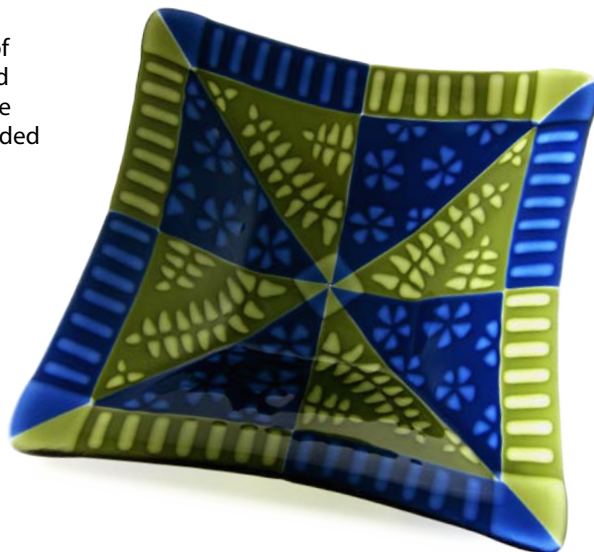
3 Place the Clear Base on top of the Layout Guide on page 2. Assemble all colored pieces on the Base, using the Guide and numbers to accurately place them. Affix all pieces with pinpoints of glue.



4 Nip design elements from Clear glass to create the "tinted fabric" look in each of the sections. It's important to have a fairly equal amount of Clear glass on the 3rd layer to allow for a uniform finished shape and thickness. Note: very small amounts of

of the dark colors can be used on top of the Clear glass (as a 4th layer) for added interest. Full fuse. After fusing, the piece was slumped in Creative Paradise's "Folded Square" mold #GM-111.

2 Color Variation (at right)
This 10-inch piece was slumped in Slumpy's "Jordan" mold #SM-9049.





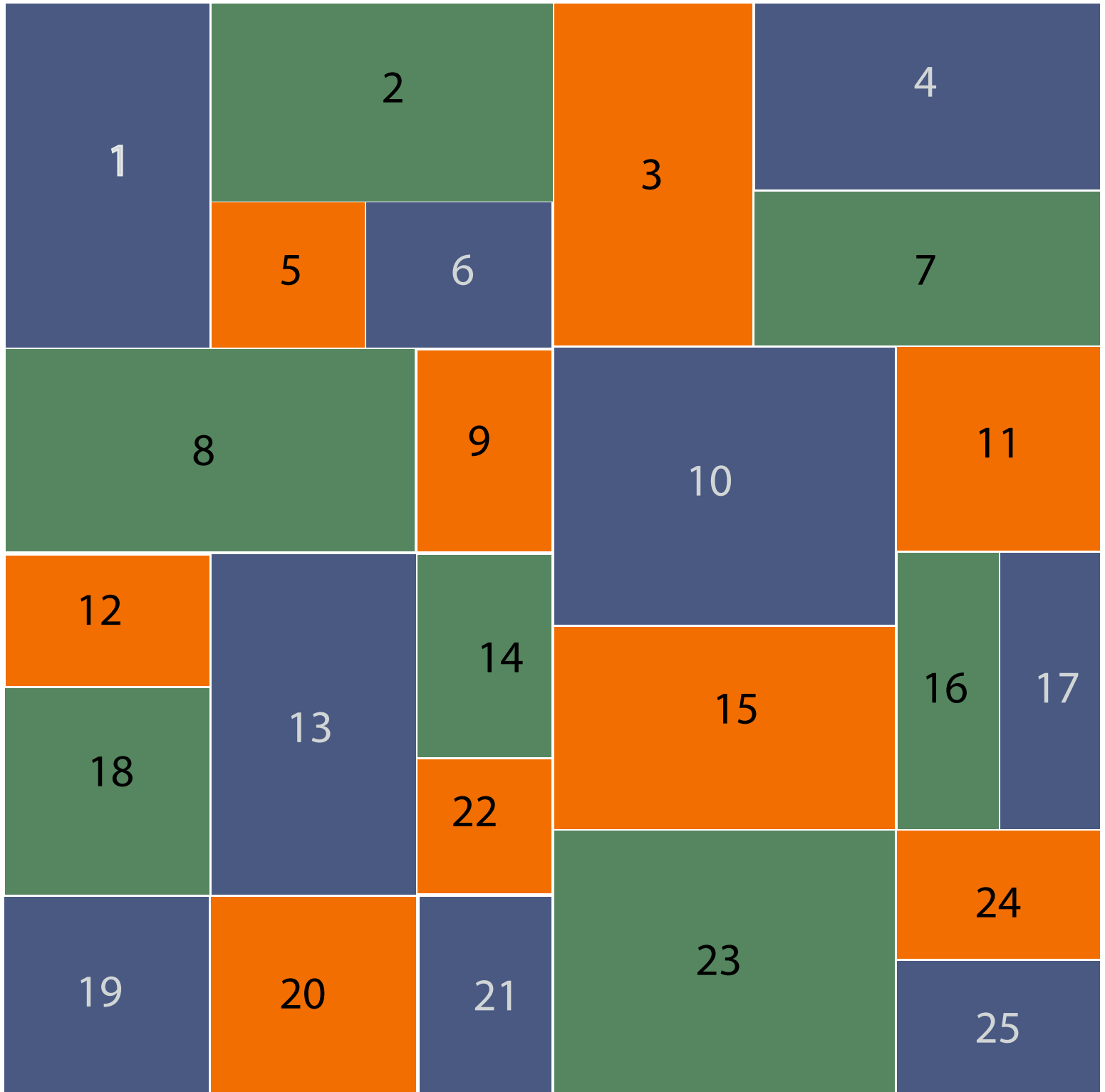
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Color Tint Technique

Cutting/Layout Guide

Use to cut shapes then place Clear Base on top of the guide below. Position colored pieces on the layout according to number.



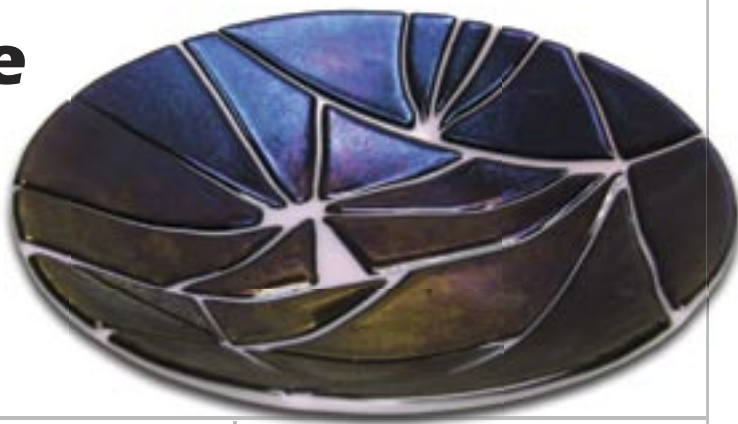


Project Guide

CrackUp! ■ decorative platter

Glass Cutting: **circle**

Firings: **contour fuse, slump**

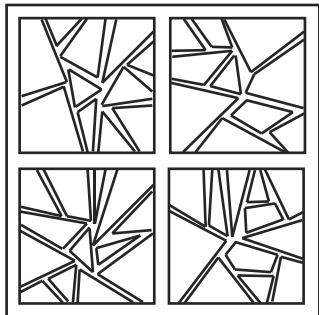


Step-by-Step

1. Place your clean overlay piece on some stiff cardboard, cover with several layers of newspaper and give it a few whacks with a hammer—crack it up—but don't overdo it. Keep the pieces organized so you can rebuild easily.
2. Paint a thin layer of Klyr-Fire adhesive on your base Blank.
3. Rebuild the cracked-up overlay on top of your base Blank, leaving spaces between the pieces. Begin with the perimeter, then work to the inside.

Variations

- Fill the gaps with a contrasting color of fine Frit. Brush all the stray Frit off the top layer before firing.
- Use a 10" Square for the base Blank, and four 4" Squares to crack up. Then place your cracked-up squares individually on the Blank, like this:



Materials We Used

Blanks: 10" round for base; 8" round for overlay

(or see Variation below)

Keys to Success

- Color contrast is the key to making this project spectacular.
- Klyr-Fire adhesive burns off in the kiln and is slow to dry, so you can move pieces around for several minutes.

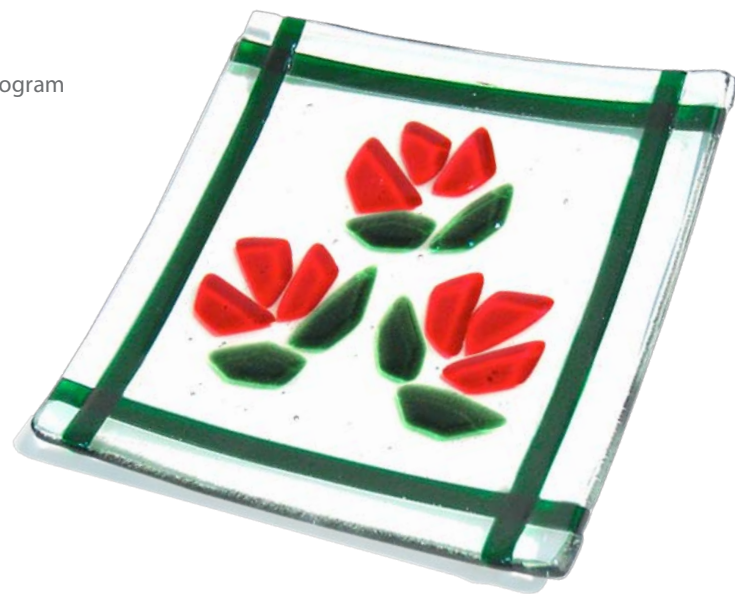
Re-built





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Project Guide



Criss-Cross Border ▪ Decorative dish

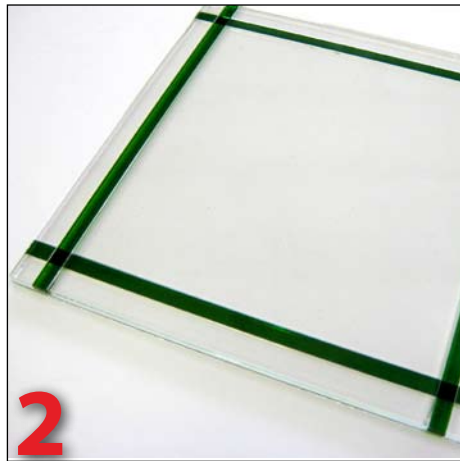
Glass Cutting: **Simple straight lines**

Firing: **Contour fuse**

Use this charming border technique to frame any design — from simple nipped flowers to anything you dream up!



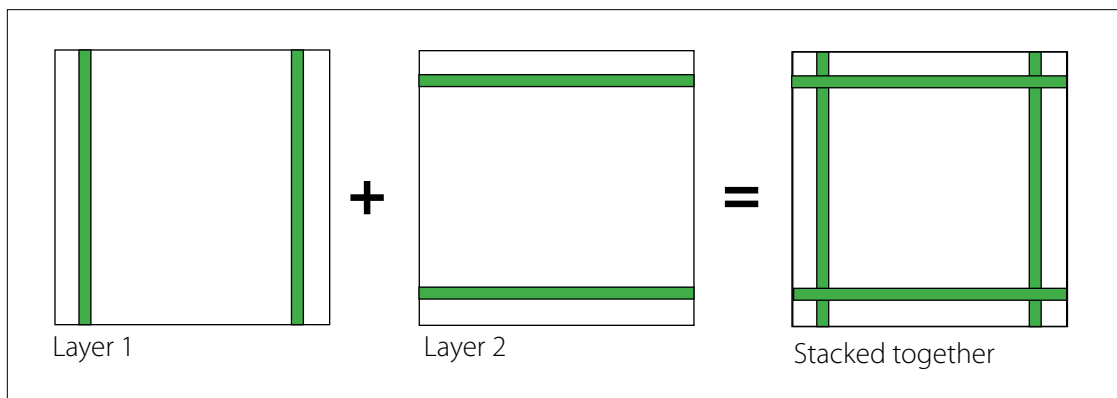
Cut four ½" x 8" strips from Clear, two 6½" x 8" from Clear, and four ¼" x 8" from Green.



Arrange layers as shown in diagram below. (Layer 2 is identical to layer 1, but rotated 90°.) Stack layers on kiln shelf lined with kiln shelf paper.



Nip or cut flowers (or any other design of your choice) and arrange in center. Contour fuse. Slump as desired.



Materials We Used

Glass Colors: 100SFS Clear, 123SF Medium Green, 151SF Cherry Red. Note: 171SF Orange was used for the flower variation shown in step 3.



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Project Guide

3-inch Daisy Tiles

Glass Cutting: **simple cutting/nipping**

Firings: **contour fuse**



Step-by-Step

A single tile can be used as a sun catcher or refrigerator magnet. And — just like the daisy chains you made as a kid — these tiles can be grouped together to make bigger projects! Nine tiles make a great decorative dish, with 12 tiles, you can make a lively mirror.

1. Cut a 3-inch Clear square.
2. Nip (or cut) petal shapes out of an opal color of your choice (approximately 1¼ inches in length). Select a coordinating Pebble for the center of your Daisy.
3. Apply KlyrFire to the Base. Set the Pebble in the center and arrange the petals around it.
4. Choose a palette of Frit and nipped glass for your Daisy to “nestle into.” (We used 5 shades of Green hues in varying sizes.) Set some larger pieces randomly around the Daisy. Fill in remaining space with a single color of Medium Frit. (Brush off daisy if necessary.)
5. Contour Fuse – making sure to leave enough space around each tile in the kiln.

Materials We Used

Base: 3-inch 100SFS Clear Square

Glass Colors: Bright Opals for petals; 528-4SF (Olive Green), 125SF (Dark Green) nipped into larger pieces for background

Pebbles: Med. Amber

Frit: 523-2SF (Teal Green) – Coarse, 533-1SF (Sky Blue) – Coarse, 526-2SF (Moss Green) – Medium



Projects Made From Tiles

Sun catcher: Drill hole in tile with a diamond drill bit and hang with fishing line from small suction cup.

Magnet: Attach a strong magnet to back. (Available at Craft Stores.)

Dish: Arrange 9 tiles onto a 9½ inch square neutral base (we used Ivory) leaving an even amount of space around all tiles. Tack Fuse. Slump.

Mirror: Fuse tiles individually as directed above. Arrange 12 tiles around the perimeter of a 12 x 12 –inch neutral base. (We used Ivory.) Tack Fuse. Cut raw edged mirror to size and glue in place using strong adhesive such as E-6000. (Mirror can be found at hardware stores, craft supply centers, or custom flat glass shops. Be sure to cut the mirror shiny-side up.)



Project Guide

Edgy Platter - decorative platter

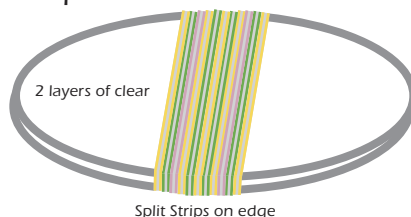
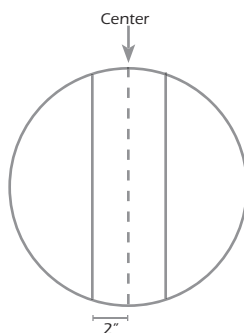
Glass Cutting: **straight lines, simple curves**

Firings: **full fuse, slump**



Step-by-Step

1. For assembly, use a Portable Assembly Surface* and some Thinfire paper. Build your project on this or directly on a protected kilnshelf.
2. Trace around one of the Rounds with a pencil or Sharpie, directly onto the Thinfire paper.
3. Find the center of each Round and mark it. Draw a straight diameter line through the center with a Sharpie.
4. Measure 2 inches on both sides of that line and draw parallel lines. Cut, and remove the center section. Do this for both Rounds.
5. **SPLIT** all the Strips in half lengthwise (creating two pieces, each 1/4" wide). See the Tech Tip, below.
6. Using your traced guide, re-form the circle by stacking the sections of Rounds in two layers. Lay the split-Strips **on edge** in the gap, in a symmetrical pattern.
7. Mark the Strips at the traced reference line, and NIP as needed to conform to the circle.
8. Full fuse, then Slump if desired.



Materials We Used

Blanks: Two 12" clear Rounds

Strips: 4 Pale Amber 110.2SF
2 Sea Green 528-1SF
8 Clear 100SFS
2 Almond 210-72SF

Keys to Success

You may get an imperfect edge with this design, because the split strips are rarely of even height after assembly. Minimize this effect by splitting strips as evenly as possible, or exaggerate the effect as a design element, as shown below.

Variations

- Vary the Strip lengths to create a pattern of long-short-long.
- Play with the color combinations!



Note:

Strips = 1/2 x 12" glass strips

***Portable Assembly Surface**
= an unglazed ceramic tile used to support a project that has no Blank.

Technical Tip: Splitting Strips

When cutting 1/4" strips from sheet glass, make all your parallel score lines first, then run every other score line with your running pliers. Last, gently split each resulting 1/2" strip in half.

Project Guide

Making Faces

Glass Cutting: **limited or no cutting**

Firings: **tack or contour fuse**

Step-by-Step

Faces can be self-hanging, sun-catchers/ wall décor — or fuse them into plates or tiles. This is a wonderful group project — the more the merrier. Invite families to create individual self-portraits – hang separately or fuse them together on a single platter. Have scout troops make their favorite forest animals, birthday celebrants make & take home their own bright face under a permanent birthday crown. Immortalize a favorite celebrity or cartoon character in glass. Fire up that imagination and get started!

IMPORTANT: There *must be two layers* of glass used to join the parts of your face to ensure that everything fuses together. If making a single-layer project, **overlap** the glass pieces (one on top of the other) to create ears, hats, ties, collars, etc. that extend beyond your basic face shape. (You can place parts side-by-side only if you are doing so on top of a base layer.)

Ideas:

Hair: Create “hair” from glass components or embedded wire. After firing, you can string wire with beads, add ribbons, yarn, feathers—you name it!

Eyes: Pebbles, Rod Dots, cut glass, bent Stringer.

Mouth: Pebble(s), Wavy Sticks, Stringer, Noodle, cut glass

Nose: Contrasting color of glass, Stringer outline, small nips or coarse Frit for nostrils

Accessories: dress up your face with a hat, bow tie, collar or earrings! Medium Frit makes perfect freckles. Glassline Paint can help create beauty marks, eyeliner and eyelashes.

To Display: Embed a wire hanging hook (or multiple hooks), attach a metal “stand off” for wall mounting, or place in a tabletop stand or easel.





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Project Guide

Fiber Paper Holiday Ornaments

Glass Cutting: **simple straight lines**

Firings: **full fuse**



Step-by-Step

This is a fun project that's easy enough for kids and yet so cute you'll want to make some yourself! They make great present-toppers or stocking stuffers — so load up a kiln full!

1. You will need a Portable Assembly Surface* covered with Thinfire paper.
2. Cut a small, simple shape from Fiber Paper. Use attached guide as a template if desired. (Tip: print or copy the guide onto a heavy paper stock first.) Place the shape onto the Thinfire paper.
3. Cut a square (or rectangle) from a light colored glass, slightly larger than your Fiber Paper shape. (Approximately 2 x 2-inches for a square or 2 x 2 ½-inches for a rectangle is fine for the shapes provided on the cutting guide.) Cut an identical second square or rectangle from Clear.
4. Stack the two layers of glass evenly over the Fiber Paper shape.
5. Hanging Loop: Cut a ¾-inch piece of 18-gauge copper wire and twist it into a loop as shown in the diagram at right. Place loop between the two, stacked layers of glass from Step 4. (Make sure loop hangs over edge of glass!) A pinpoint of glue helps keep the loop in place.
6. Full fuse.
7. Hang with colorful ribbons or raffia!

Materials We Used

Glass Colors: Assorted light shades of glass plus Clear

Fiber Paper

Wire: 18-gauge copper

Note:

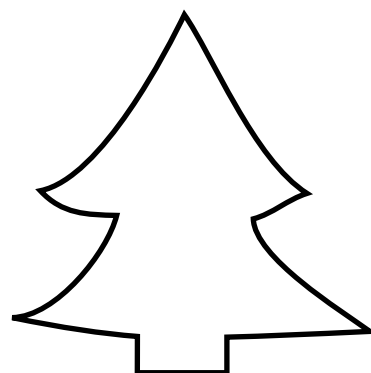
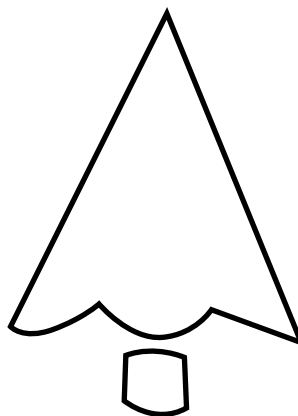
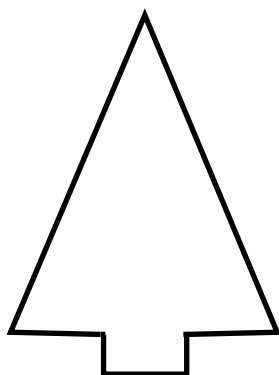
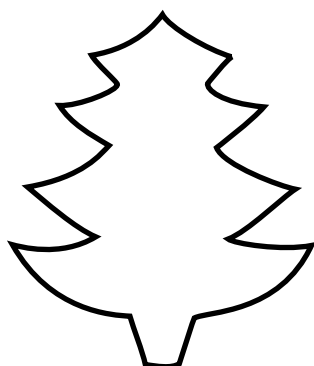
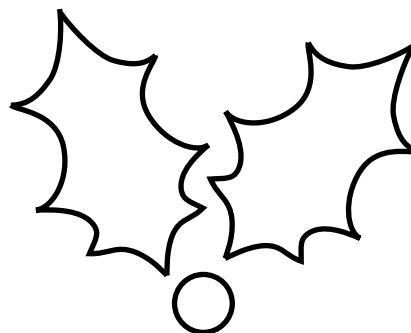
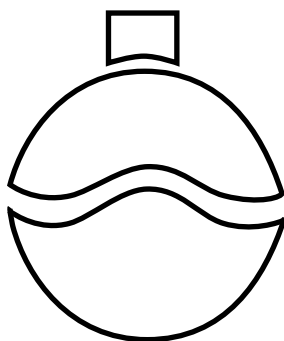
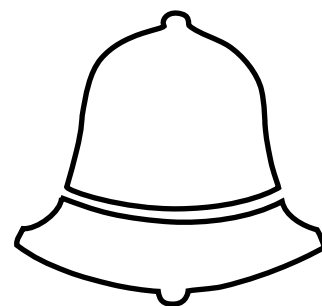
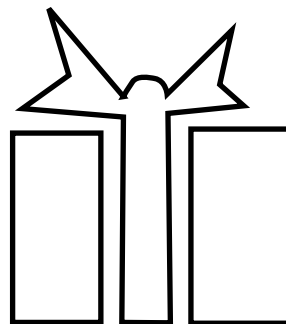
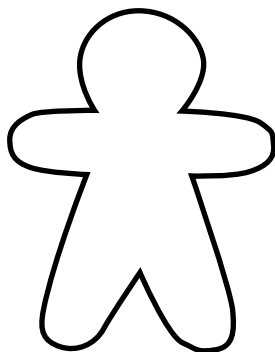
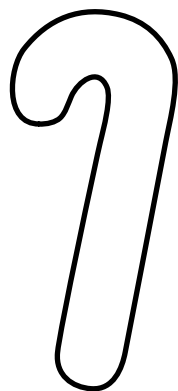
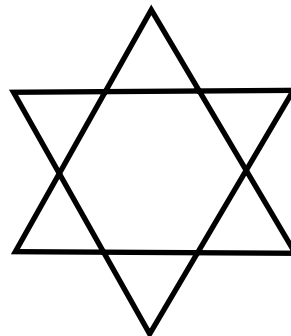
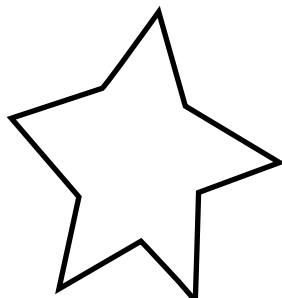
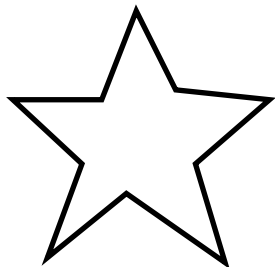
***Portable Assembly Surface** = an unglazed ceramic tile used to support a project.



Looped wire

Project Guide

Fiber Paper Holiday Ornaments ■ Cutting Guide





Project Guide



Fishie Set

- paperweights, wall decor, or suncatcher

Glass Cutting: **pattern cutting**

Firing: **contour fuse**

Step-by-Step

1. For assembly, use a Portable Assembly Surface* and some Thinfire paper. Build your project on this or directly on a protected kilnshelf.
2. Cut out pieces using the templates attached. Create a unique fish design of your own or follow our examples.
3. Stack pieces in numbered order. Some overlapping (of the tail and bottom fin) should occur to keep pieces connected after firing.
4. Use pinpoints of glue to hold pieces in place.
5. Contour fuse.

Variations

- Use bright solid colors and accent with coordinating frit and/or noodle and stringer.
- Use Iridescent Black or Clear and add dichroic accents for shiny fun.

Materials We Used

Fishie 1

Glass Colors: Spirit/694-7SF
Geneva, 100SFS Clear, 290-72SF
Cotton Candy Pink, 200SF White

Rods: Black

Fishie 2

Glass Colors: Spirit/4361-76SF
Atlantis, 100SFS Clear, 267-72SF
Sunflower

Rods: Black, Sunflower

Note:

Rod Dots = Nip off 1/4" or smaller bits of Rod to create "dots" or bumps.

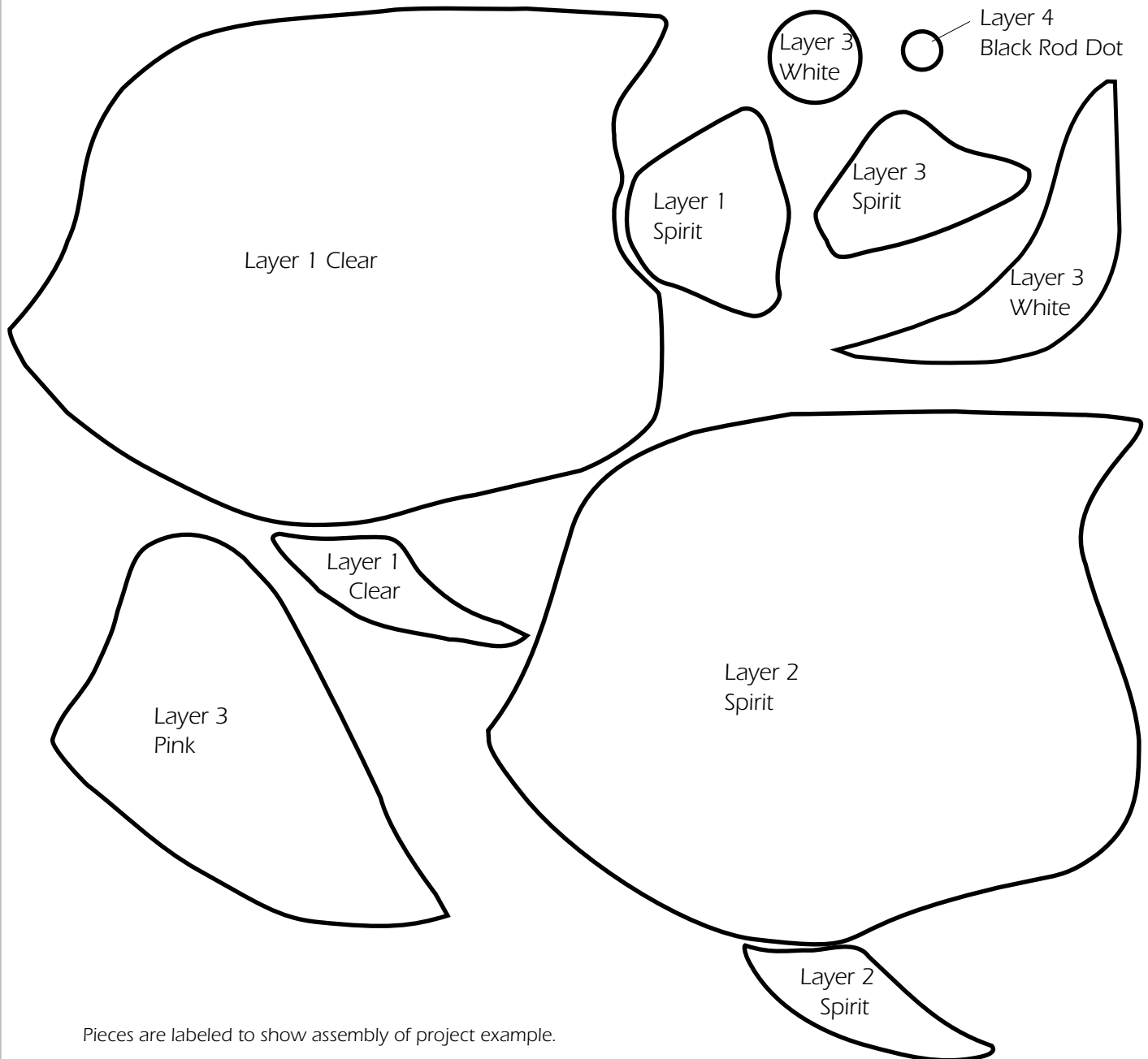
***Portable Assembly Surface**
= an unglazed ceramic tile used to support a project that has no Blank.



Project Guide

Fishie Set - (page 2)

Fishie 1 Pattern Template



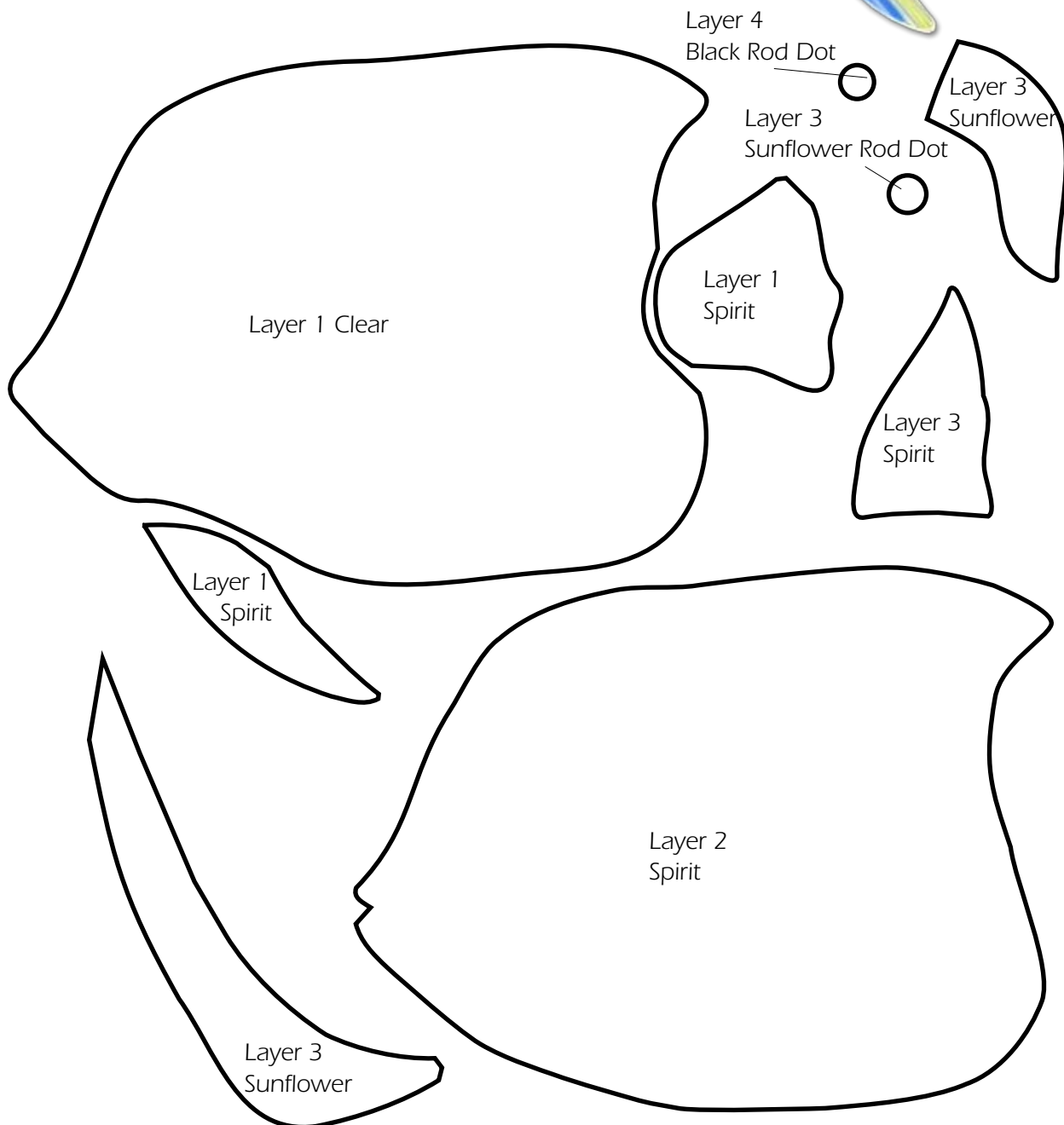
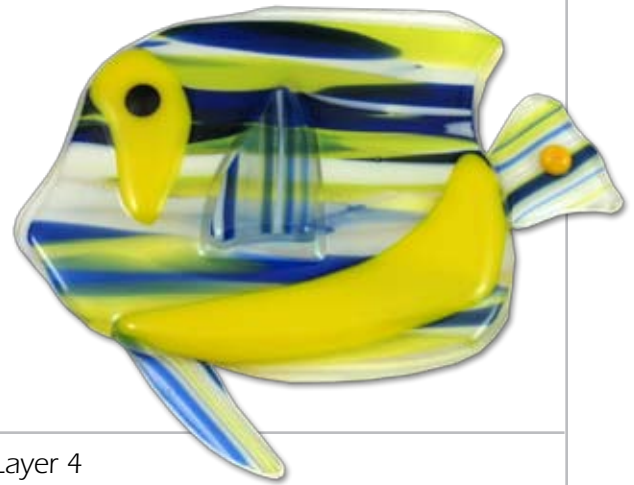
Pieces are labeled to show assembly of project example.



Project Guide

Fishie Set ▪ (page 3)

Fishie 2 Pattern Template



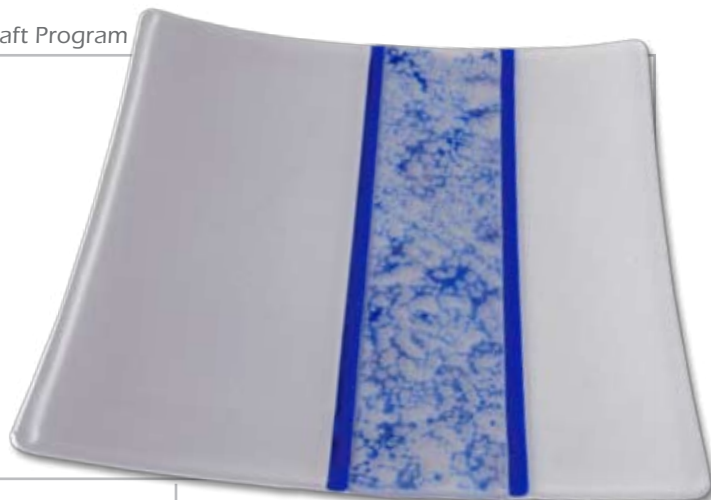
Pieces are labeled to show assembly of project example.

Project Guide

Frit Lace Accents

Glass Cutting: **straight cutting**

Firings: **contour fuse +**



Step-by-Step

1. Create elegant, organic effects with this easy technique. Begin with a kiln shelf lined with ThinFire paper. Choose two or three coordinating shades of fine frit. Sprinkle the frit randomly on the paper, concentrating color in some areas while leaving other small areas open.
2. Contour fuse (to about 1440° hold for 5 minutes.)
3. Carefully remove all traces of Thinfire paper by dipping the fused "Frit Lace" sheet into a shallow container of water and gently wiping. Place the finished piece of frit lace on a single sheet of Clear glass or other neutral/ coordinating color (see variations).
Note: at this stage, the Frit Lace is very delicate -- handle with care!
4. Contour fuse again.
5. Now you have a sheet of custom glass that you can use to accent projects with. Cut on the smooth bottom side and have fun!

Variations



Red, Orange and Marigold Opal Frit Lace fused onto Black base. After second fusing, strips were cut and used as a border accent.



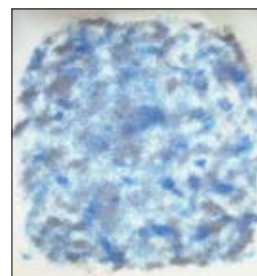
Moss Green and Teal Frit Lace fused onto an Ivory base. After second firing, squares were cut and laid on alternating Moss Green and Teal transparent squares on top of an Ivory base.

Materials We Used

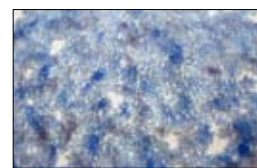
Frit: Fine grade Light Blue, Dark Blue and Grape

Finished project: Layer 1 = 218-71SF Stone. Layer 2 = Clear, 1/8" strips of 132SF and a Frit Lace strip.

Keys to Success



Frit sprinkled onto shelf.



Frit Lace after fusing.



Frit Lace fused onto clear base, cut into strips.

Project Guide

Garden Border Dish

Glass Cutting: **Simple curves, and nipping**

3-Step Firing: **Full Fuse Base, Contour Fuse, Slump**



This fun piece is built on a 2-layer, "Bubble Base" for added interest — and stability (see Tips & Tricks below).



Begin with two 8-inch square pieces of 100 CSF Clear Cord and a palette of colors for your "garden" accents. To make the "Bubble Base," set the first Clear Cord square on your Kiln Shelf Paper, **textured side up**.



Lay the second Clear Cord square on top of the first, **textured side down**, turning the second square 90° so that the texture grains "crisscross." Full fuse using the basic System 96® 6-segment Firing Schedule on our website.



After firing, wash the base in warm water and dry. Turn it upside down to take advantage of its flatter side and begin creating flowers. Have fun with the shapes and colors as you nestle elements together.



Keep adding flowers and greenery until you complete the border. Nearly all of the flowers and leaves shown here were created using only glass nippers.



Add dimension by stacking nipped slivers and details on top of flowers. Tack Fuse, then Slump. We used Slumpy's SM-005 drop out mold with the schedule at right.

Slumping Schedule We Used

Seg.	Ramp (°F per Hour)	Goal Temp (° F)	Hold Time (Minutes)
1	300	300	15
2	300	1100	60
3	130	1250	45
4	9999*	950	60
5	150	800	10
6	300	100	0

Tips & Tricks

In deep, dramatic molds, glass will thin out as it drops, and may become too fragile if there isn't enough glass volume. In this piece, our 2-layer Bubble Base provided the necessary glass volume in addition to adding some extra interest to the piece.

Materials We Used

Glass: 100CSF, 110.4SF Light Amber, 140.8SF Pale Purple, 240-72SF Mauve, 240-74SF Lilac, 267-72SF Sunflower, 528-2SF Light Olive, 161SF Yellow, 228-72SF Celadon, 271-71SF Persimmon, 200SF White, 170.2SF Tangerine, 110.8SF Med. Amber, 523-2SF Teal, 210-71SF Ivory.

Frit: Med Blue Opal

Stringer: Amazon Green



Spectrum Glass presents: The System 96® Glass Craft Program

Project Guide

Home Sweet Home

Glass Cutting: **simple straight lines**

Firings: **tack fuse** (see Tech Tip)



Step-by-Step

1. This project is great for a wide range of ages and skill levels – depending on how much detail you choose to incorporate. Shoot for a whimsical, child-like character or aim for more sophistication – you're the architect! Begin with a sketch or a clear idea of what you want to create. Gauge the scope of your house or neighborhood concept and choose an appropriate size and color blank.
2. Start by creating the basic building(s) you envision. Just about any style of architecture can be represented with simple, geometric shapes. Squares, rectangles, triangles and trapezoids will be your main building blocks. Glue the pieces onto your blank with pinpoints of glue.
3. Once the basic structures are in place, it's time to have fun with detail. Some tips follow:

Windows: Use stringer, noodle or Glassline paints to define window panes and shutters.

Trees & Shrubs: Strips, Noodle or Stringer make great tree trunks or branches. Foliage, fruit and flowers can be created with nipped or cut glass pieces, Frit, and Rod Dots.

Flowers: Stringer stems, Frit or small nipped pieces for petals and leaves. Window boxes add a charming touch. Use a thin strip for the "box." Dab on some Klyr-Fire and carefully sprinkle Frit of various sizes and colors (Layer a generous amount of green shades under brighter petal colors.)
4. Tack Fuse. (See Tech Tip.)
5. Display options: make the piece self-standing by slumping it over a curved "S" mold, use an easel stand, slump it into a platter or fuse hooks on the top and hang with colorful ribbons.



Materials We Used

Anything that catches your eye -- you have complete creative freedom!

Tech Tip: Preserving Detail

Details created with smaller pieces of glass such as Frit, Noodle and Stringer are fragile, and will disappear if over fired. A tack fuse will preserve the highest amount of definition and detail. (You can always fire a second time, if a little more contour is desired.)



Spectrum Glass presents: The System 96® Glass Craft Program

Project Guide



Hydrangea Platter

Glass Cutting: **Minimal**

Multiple Firings: **Full Fuse Base + Tack Fuse x 2 + Slump**

Hydrangea Opal glass inspired us to create a dish showing off both our glass and the traditional Garden favorite.



Preparation

Base: Since the lovely flower detail of this project will only be fired to Tack Fuse temperatures, begin with a 2-layer Base that has been fully fused. We used a pre-cut 12-inch System 96® Double Thick Clear Circle, but you can cut your own 12-inch circle(s) if you prefer. (If using 3mm glass, use two layers and a schedule with a good bubble squeeze. See system96.com for info.)

Design: Nip strips of Hydrangea Opal until you have an ample supply of flower-shaped petals. Cut leaf shapes in various sizes from a mixture of Green glasses.



Design Layer1: Brush Klyr-Fire onto the prepared Base (in a small area at a time), and begin arranging the leaves and petal sections of the flowers. Form rounded shapes for each of the flowers. This design layer is going to be covered by a second one, so it isn't critical that each flower or cluster be a perfectly accurate representation of a Hydrangea. Arrange the leaves more randomly, using a range of colors and sizes. (Note: we put a few leaves in place when we originally fired our Double Thick Base, but this isn't necessary.)



Frit Accent/Shading: Frit can be used to create shading effects and add interest in the piece. Frit in various Blues was used in the flower clusters to help create shadow and dimension, and several shades of Green Frit were used in the leaves. (See the Materials List for products used.) When satisfied with your first layer, lightly Tack Fuse. (Note: Hydrangea, like many opal glasses, is very soft, so be conservative in this firing.)



Design Layer 2: After firing, you'll be better able to see how the Frit work came out. Add more, if desired. We didn't see enough of our darker Blue shading in the flowers, so we added more.



Next, build the second layer of petals — this time, making sure to form the 4-petal clusters Hydrangeas typically have. Add more leaves and/or embellish the ones already in place. Tack Fuse again. Slump as desired. We used Slumpy's "Coloma" mold #SM-165.

Tack Firing Schedule We Used

Seg.	Ramp (°F per Hour)	Goal Temp (° F)	Hold (Minutes)
1	250	250	30
2	250	1050	20
3	200	1225	20
4	250	1360	10
5	9999	950	60
6	200	800	10
7	300	100	0

Materials We Used

PAPYROS® Kiln Shelf Paper

System 96 Glass:

Clear 12-in D-T Clear Base
230-71SF Hydrangea Opal
121SF Light Green
123SF Med. Green
526-2SF Moss Green
226-74SF Amazon Opal

System 96 Frit:

100 Clear (Medium)
526-2 Moss Green (Fine & Med.)
125 Dark Green (Fine)
130.8 Pale Blue (Fine)
132 Light Blue (Fine)
230-72 Med Blue Opal (Med.)

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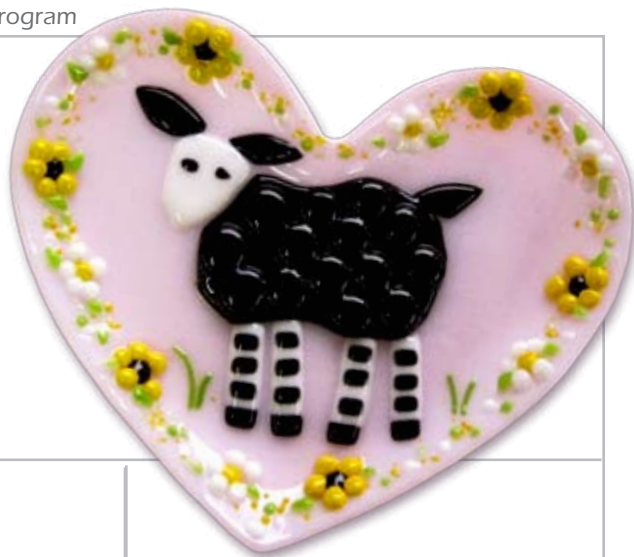
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Project Guide

I Love "EWE" Heart

Glass Cutting: **simple pattern cutting/nipping**

Firings: **semi-contour fuse**



Step-by-Step

1. Begin with an 8-inch Pink Heart Blank.
2. Cut or nip the Sheep's body, ears, hooves and tail out of Black Opal glass. (Cutting template is provided).
3. Cut or nip the face and legs out of White Opal glass. (Legs are approximately 3/8-inch strips, cut to desired length.)
4. Arrange Sheep in center of Pink Heart Blank, leaving room for border on all sides.
5. Add Sheep detail: Black Pebbles = fluffy wool, Black Noodle = stockings, etc. Use Klyr Fire to adhere elements.
6. Black, White and Marigold Rod Dots are used to create the daisy and sunflower border. Add leaves (made from nipped Amazon Green or coarse size green frit) and a bit of medium sized frit in between the larger flowers.
7. Semi-Contour Fuse.
8. If desired, slump into heart-shaped molds, available from your supplier.

Materials We Used

Blank: 8-inch Pink Heart

Glass Colors: Black 1009SF, White 200SF, Amazon Green 226-74SF

Pebbles: Black

Rod Dots: Black, White, Marigold

Frit: Medium Size White and Marigold

Keys to Success

Semi-Contour Fuse: We fired at 1425 F for 5 minutes, to retain contour and dimension.

Additional Heart Designs

A big part of the design is already in place when you begin with a Heart Blank. Create a border emphasizing the heart shape, write a name or brief message in the center, or use the whole space evenly for a more uniform design. Soft and pretty or wild and crazy – with the new System 96 Heart Blanks, it's completely up to you.

Examples shown:

- Red stripes created with cut glass, noodles & stringer
- Rod dot flowers, nipped glass leaves and medium frit
- Stringer stripes with rod dot and nipped glass bows

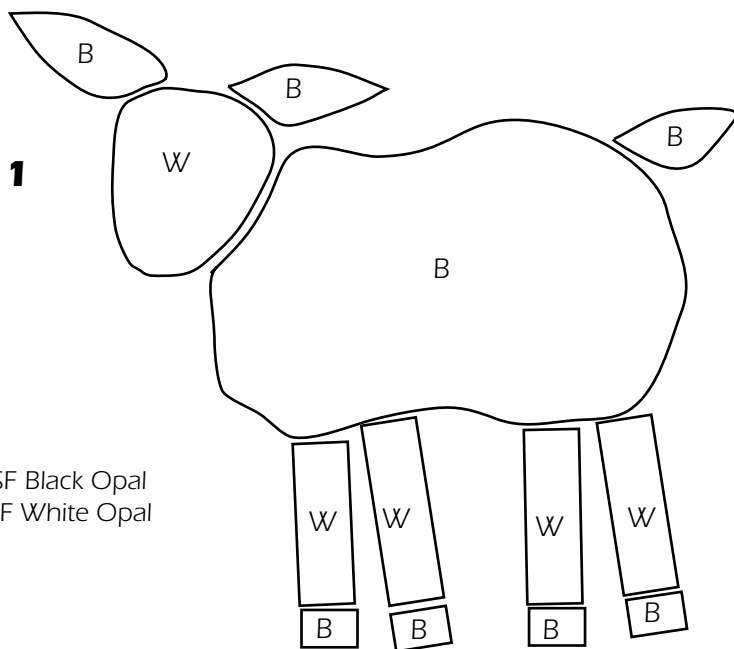


Project Guide

I Love "EWE" Heart Pattern Guide



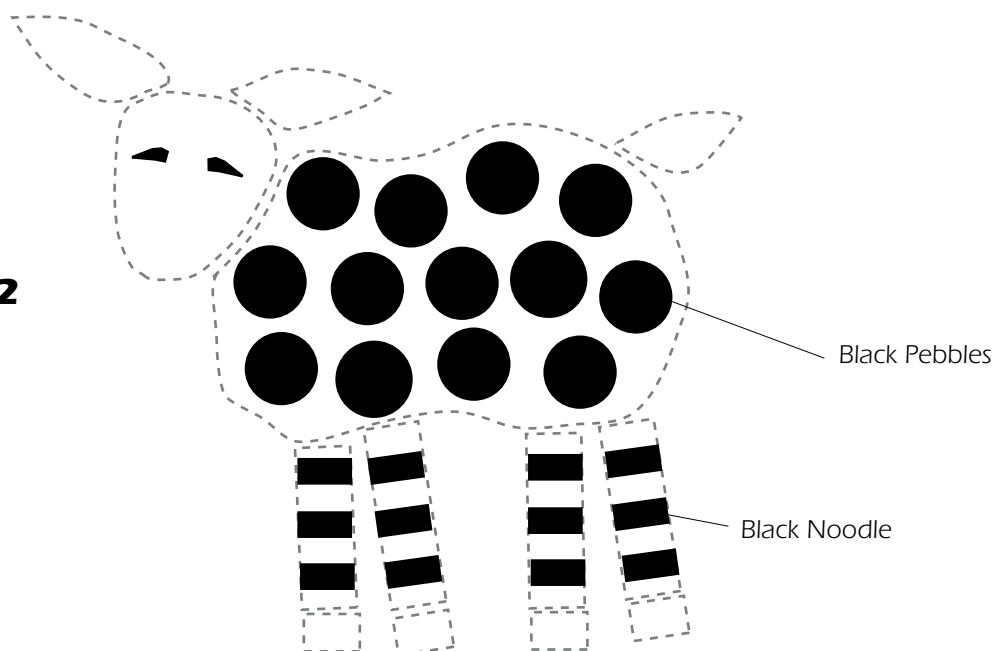
Layer 1



B = 1009SF Black Opal
W = 200SF White Opal

Note: This project is open to interpretation. The pattern is offered only as a guide -- feel free to make adjustments to make your own personal statement.

Layer 2





Spectrum Glass presents: The System 96® Glass Craft Program

Project Guide



May Flowers ▪ votive holder

Glass Cutting: **simple straight lines**

Firings: **contour fuse, slump**

Step-by-Step

1. Nip or cut triangles for petals and leaves, and affix with pinpoints of glue at the corners of a clear 6" square Blank.
2. Nip four 1/8 - 1/4" pieces of Rod. Stand one on end in the center of each flower and glue in place.
3. Scatter some bits of green Stringer amongst the flowers.
4. Contour fuse for attractive dimension.
5. Slump over a kiln washed stainless steel tumbler.
6. Add light!

Variations

Look around you: turn any spring-blooming flower into a simple, colorful design.

Materials We Used

Blank: 6" clear square

Glass Colors: four flowery colors plus green

Stringer: a dozen or so green bits, about 1/2" long

Rods: one inch, opal yellow

Keys to Success

▪ Normally, you leave the center of the votive blank free of design elements, so the bottom stays flat. In this design, it's not necessary because Stringer will melt completely into the Blank, even at Contour temp.

Technical Tip: Votive Design

Because your votive will be slumped quite radically over a narrow tumbler, it's best to keep the weight of your design elements fairly well balanced. This will keep the piece from tipping over during the slumping process. And remember, the corners of your square Blank will be prominent after slumping. Make them the focus of your design.



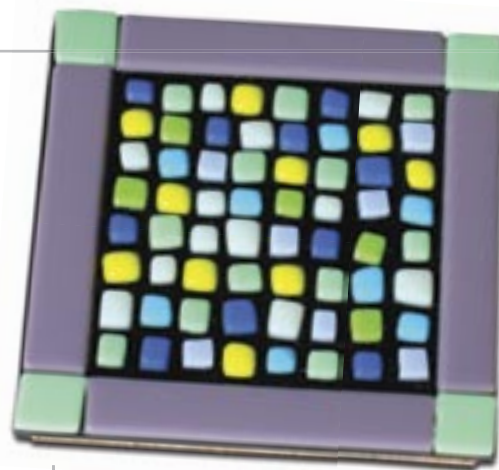
Project Guide

Mediterranean Mosaic - coaster

Glass Cutting: **simple, straight lines**

Firing: **tack fuse**

Accessories: **cork or neoprene backing**



Step-by-Step

1. Cut the Strip into four 3" lengths.
2. Using pinpoints of glue, affix the 3" lengths to the edges of Blank, adding a contrasting color Chip at each corner.
3. Divide the rest of the Chips into quarters with your nippers. Accuracy is not critical, as the quirky shapes are part of the appeal.
4. Dribble some Klyr-fire onto the center of your Blank. This will hold the tiny squares in place as you jockey them into position.
5. Create a random pattern or the design of your choice with the squares.

Variations

- Use all the same color of Chips.
- For the central design, use Noodles nipped into square shapes or Strips nipped into 1/4" or smaller rectangles.
- Make a set, of course! Vary the color scheme for each one.
- Use this mini-mosaic concept on a larger Blank and create a picture or repeating design element with the colors.
- For a smooth-surface trivet, "bury" the mosaic under a cap of clear glass. Use clear irid for a magical effect.

Materials We Used

Blank: 4" square

Chips: 4 matching for corners; 16 additional color-coordinated chips for "mosaic" inlay

Strip: one

Note:

Chips = 1/2" glass squares

Strips = 1/2 x 12" glass strips

Pre-Firing



Technical Tip: Controlled Dimension

Because glass is not absorbent, functional coasters benefit from surface dimension and an uninterrupted border to contain moisture. When TACK fused, the design elements create a network of spaces to hold condensation, while still maintaining a level surface to support that glass of lemonade!



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Project Guide

Party Platter ▪ multifunctional plate

Glass Cutting: **simple straight lines**

Firings: **contour fuse, slump**



Step-by-Step

1. Select an appealing combination of colors.
2. Nip an assortment of roughly triangular shapes in varying sizes.
3. Arrange the nipped pieces around the outside 2 inches of your Blank. Start with larger pieces to the outside, and fit them together like a jigsaw puzzle. Leave about 1/8" between pieces.
4. Contour fuse, then slump into a rimmed square or flare mold.

Variations

The white Blank provides great contrast whether using transparent or opal colors. For black Blanks, use all opals.

Materials We Used

Blank: 8" white Square

Glass Colors: 6-8 different bright colors

Keys to Success

Make sure colors are **evenly dispersed** throughout the piece.

A **Contour Fuse** leaves some attractive dimension at the rim and maintains an even project edge.



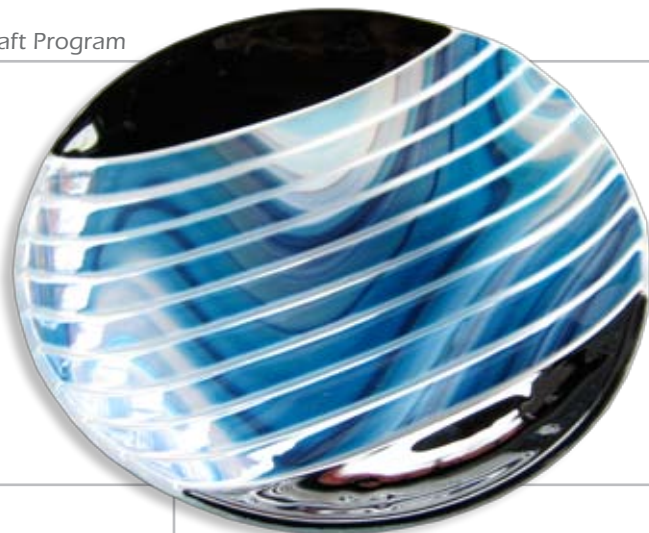
Spectrum Glass presents: The System 96® Glass Craft Program

Project Guide

Classic Pattern-Shift Design

Glass Cutting: **pattern cutting**

Firings: **full fuse, slump**



Step-by-Step

This design takes advantage of the beautiful stir patterns in mixed-color glasses.

1. First create two black "bookend" pieces to frame your pattern design: Lay your Clear circle Base onto the black glass and use a Sharpie pen to trace around a section of the curve. Connect the two ends of your trace line with a straight line, and cut. Our black bookends measure 1.75" across at the center.
2. From a mix-color glass sheet, carefully cut a sequence of strips about 5/8" wide by 12" long. Try to retain continuity of the pattern by keeping the strips in order. (If you lose a strip, no worries; your piece will still look great.)
3. Re-assemble your strips on your work surface, pattern-side-up, leaving a gap between each one (1/8" +), with bookends in place. If you like, "shift" & re-order the strips to offset the Pattern in the glass, for effect. Fiddle around to achieve an appealing pattern. (See Variation photo)
4. Lay your circular Base atop your assembled strips and trace the circle onto them. Then trim each strip on the trace lines, so they form-fit to the shape of your circle. Reassemble trimmed strips on top of circle Base, re-creating your original pattern, along with the black "bookends." Glue to prevent movement.
5. Fire & Slump!

Materials We Used

Base: 10-inch Clear Circle

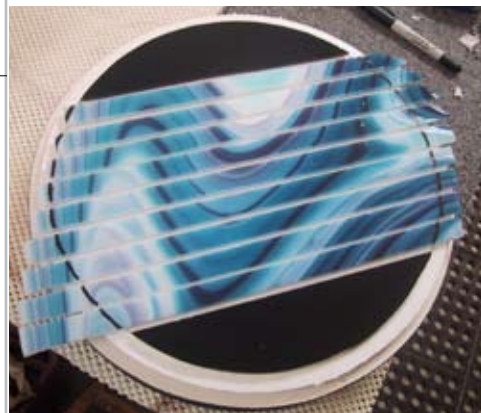
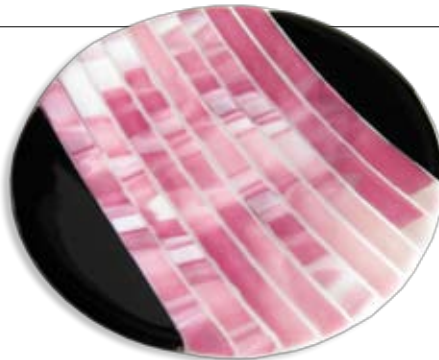
Glass Colors: OA/634-52SF
Blackberry Ceram OpalArt,
1009SF Black

Project Cutting

Shows strip layout and marking technique

Variation:

Uses 397-2SF Crystal Opal Pink with the pattern shifted.





Spectrum Glass presents: The System 96® Glass Craft Program

Project Guide

Spirit of Peace ■ votive holder

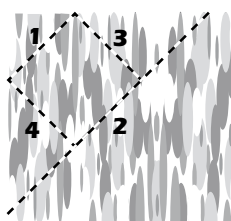
Glass Cutting: **simple straight lines**

Firings: **full fuse, tack fuse, slump**

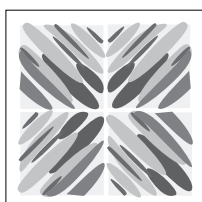


Step-by-Step

1. Draw a 5.5" square on the Spirit glass, at a 45° angle to the "comet" pattern on the glass. Cut in the order shown (leaving a large area of glass for later use).



2. Then cut your new 5.5" square into quarters and arrange as shown on Blank. Affix with pinpoints of glue, leaving space at the edges.



3. Split the iridescent Strip down the middle to form two 1/4" strips. Nip or cut into 6" lengths and affix to the edges of Blank. For a consistent look, make sure the coated side is either all UP, or all DOWN (see Tech Tip, below).

4. Full Fuse.

5. After the glass has completely cooled, add Doves at two opposite corners. Create an "olive branch" with Stringer and Noddle bits.

6. Add detail to Doves (feathers, eye) with Glassline black liner. Use the fine tip or a small paintbrush.

7. Tack Fuse, then Slump over a kiln-washed stainless steel tumbler.

Materials We Used

Blank: 6" clear square (We cut a 6" square from 130.8SF Pale Blue.)

Glass Colors: Spirit4941SF Val-halla

Strip: 1 - clear iridescent I/100SFS

Stringer: green

Noodle: green

CutUps™: two white Doves

GlassLine black liner

Small paintbrush

Note:

Strips = 1/2 x 12" glass strips

Keys to Success

This design calls for two different fusing levels: FULL to create a smooth, two-layer base, and TACK to retain detail and dimension for the Dove and olive branch.

Technical Tip: Which Side Up?

Since irids and dichro look different when fired with the coated side UP or DOWN, here's a good way to tell which side is "up." Hold your piece at an angle so you're looking THROUGH the surface of the glass AT the edge. Jockey it until you see that on the coated side, the iridescence extends all the way to the edge.



Spectrum Glass presents: The System 96® Glass Craft Program

Project Guide

1-2-3 Pebble Ornaments

Glass Cutting: **none**

Firing: **contour fuse**



These Holiday Ornaments are adorable and kid-friendly!



1 Gather Pebbles™, a 5-inch square piece of Kiln Shelf Paper, a Clear Chip, a small piece of copper wire, and Elmer's glue.



2 Glue Pebbles directly to the shelf paper in the shape of the desired ornament. *All Pebbles must touch* in order to fuse properly.



3 A hanging loop is created by gluing a copper wire between the Clear Chip and an outer Pebble. (After firing, bend the top of the wire into a loop.)

Make sure all Pebbles are touching then fire using a Contour Fuse schedule. We used 1440° for a ten minute hold.



Hang ornaments with metallic or coordinating ribbons to add to the fun.



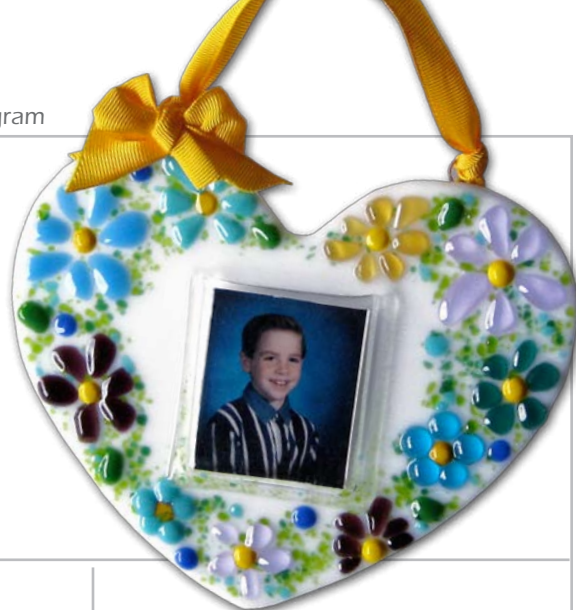
Trace this circle onto your Kiln Shelf Paper to use as a guide for making the wreath. (Wreath berries are small, nipped pieces of Red Opal Rod nestled on top of completed wreath.)

Project Guide

Photo Frame Heart

Glass Cutting: **simple straight cutting/nipping**

Firings: **contour fuse**



Step-by-Step

1. Begin with a 6-inch White Heart Blank.
2. For a standard 1½ in. x 2 in. school photo, cut a 1¾ in. x 2½ in. rectangle from 1/8-inch Fiber Paper and another identical rectangle from a sheet of ThinFire paper.
3. Place the piece of Fiber Paper, rough side down on the Heart Blank, where you'll want the photo to be displayed. Create a flower border from coarse frit, nipped glass, rod dots, etc. Arrange around the Blank, using Klyr Fire to hold in place. Lightly sprinkle medium frit between the flowers, using Klyr Fire to adhere it.
4. Hanging Loops: Cut two ¾-inch lengths of 18-gauge copper wire and twist each one into a loop as shown in the diagram. Place each loop on top of a ½-inch length of clear Noodle making sure the looped portion hangs over edge of the Noodle below. A drop of super glue keeps the loop in place.
5. Position the completed Heart on top of a shelf covered with Thin Fire Paper and on top of the prepared wire loops (so that one hook is on each curve of the top of the Heart Blank). Make sure the wire loops extend slightly beyond the top of the heart.
6. Cut a 2 in. x 2¼ in. rectangle, from clear glass and position it on the Heart Blank, where you intend the photo to be.
7. Carefully place the Thin Fire Paper (from Step 2) on top of the fiber paper and then position the clear glass rectangle over the Paper layers so that the glass hangs 3/16" beyond the bottom and two sides of the layers of paper and slightly beyond the top edge.
8. Follow the slow-ramp, Contour fuse program, provided.
9. Hang with coordinating ribbon from embedded wire loops.



Looped wire glued on top of Noodle

Materials We Used

Blank: 6-inch White Heart

Glass Colors: Assorted

Keys to Success

Because the Fiber paper insulates the glass below it, a slow firing schedule is recommended for even heating. (Breakage can occur if you go too fast!)





Spectrum Glass presents: The System 96® Glass Craft Program

Project Guide

Piano Keyboard

Glass Cutting: **straight cutting**

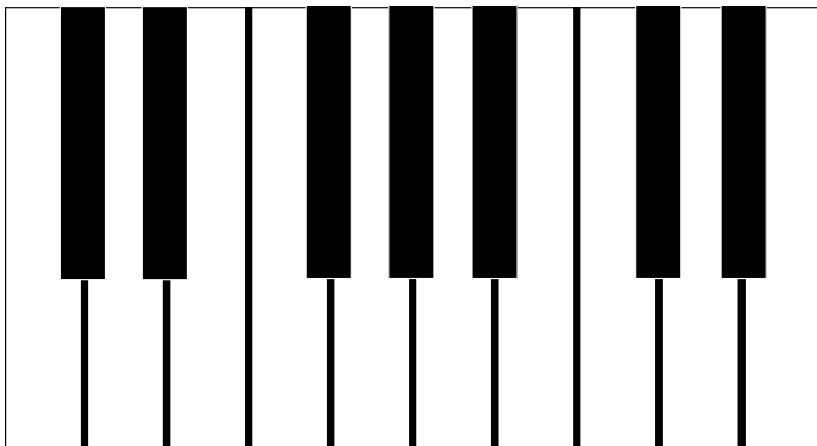
Firings: **contour fuse, slump**



Step-by-Step

This adorable project requires only straight cuts and a little attention to measurement. Make one for the musician in your life!

1. Base: 5¼" x 9-5/8" rectangle of 1009SF Black.
2. Keys: ten 7/8" x 5¼" strips of 200SF White, seven ½" x 3¼" of 1009SF Black.
3. White Keys: Stack the white strips on the base, making sure to align the two outside "keys" with the edge of the base, leaving even, vertical spaces between each one. Adhere with KlyrFire.
4. Black Keys: Set the black strips in the proper positions as shown, carefully aligning the top edges evenly with the layers below. Use KlyrFire to hold in place.
5. Contour Fuse.
6. Slump, if desired. (We used Future Forms G3028, centering the project so that the slumping occurs mostly at the top and bottom, but not much at the sides.)



Materials We Used

Glass Colors: 200SF White
Opal, 1009SF Black



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The image shows a horizontal bar chart with 10 rows. Each row contains a solid black rectangular bar of uniform length, followed by a thin horizontal line extending to the right. The bars are all identical in length and are positioned at regular intervals along the vertical axis. This appears to be a redacted version of a chart where the data values and labels would normally be visible.

Project Guide

Harvest Pumpkin

Glass Cutting: **pattern cutting**

Firings: **contour fuse**



Step-by-Step

This happy little pumpkin comes to life with its 3-D sections. Add wire hangers to create an autumn suncatcher, or use as the main element in a larger holiday dish or platter.

1. You will be cutting two pumpkin shapes. The first will be slightly larger than the second and it will be used as the base layer. Place the orange transparent glass on top of the attached cutting guide. Using a Sharpie pen, trace around the solid, outermost, line. Cut out the shape.
2. For the second (detail) layer, place a second piece of orange transparent glass on top of the cutting guide. This time, trace over all dashed and dotted lines.
3. Follow the Cutting Order instructions on page 2. Cut the long-dashed line (oval pumpkin shape) first. The next cut *must be the short-dashed line*. The rest of the dotted line ("section" cuts) can be made in any order.
4. Arrange the pumpkin sections so that all outside edges are even with the bottom layer but the inside pieces have a gap between them.
5. Add a stem, leaf, vines, or a face, if desired.
6. Contour fuse.

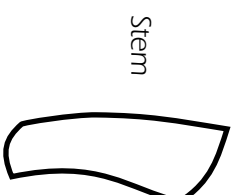
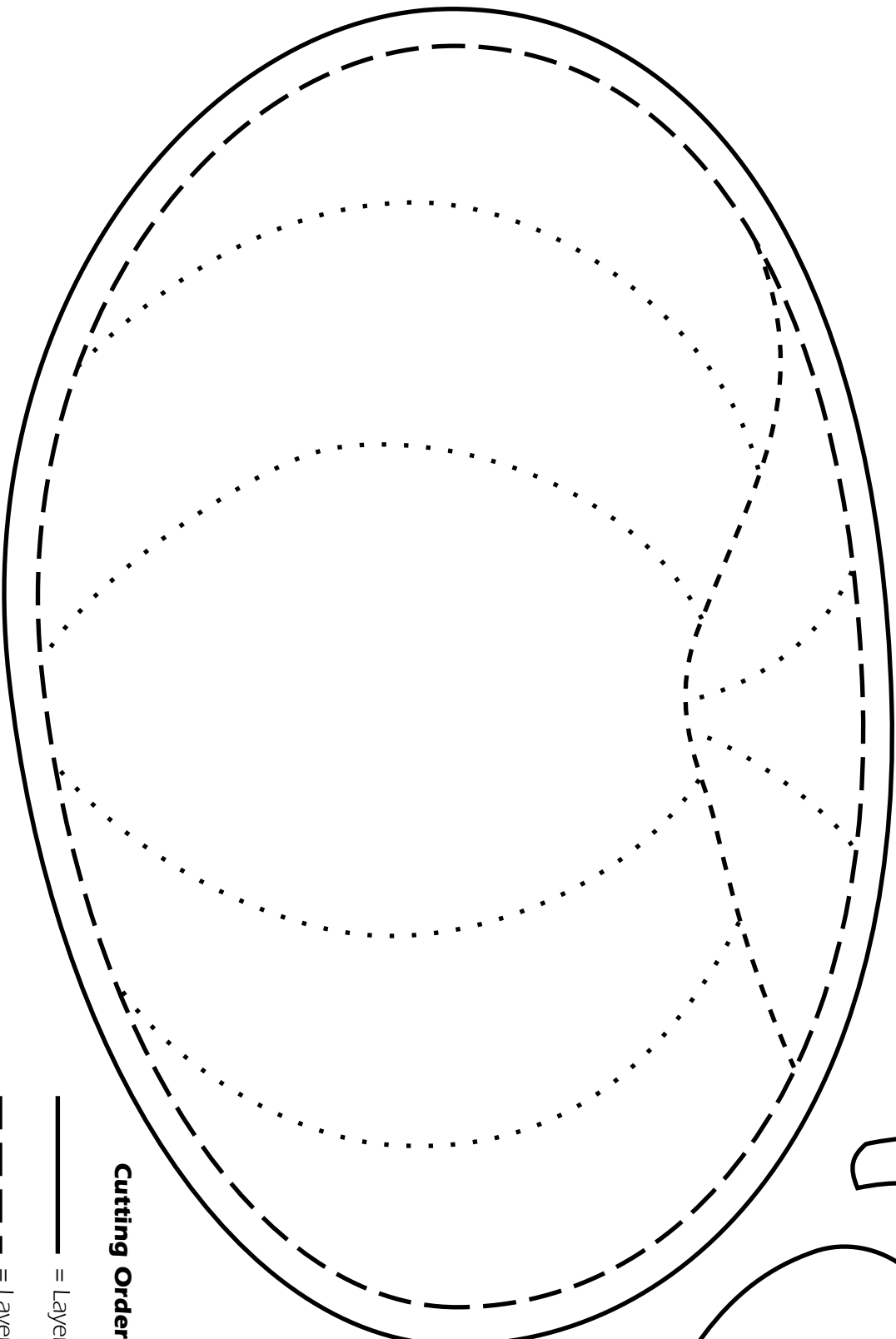
Materials We Used

Glass Colors: 170.2 Tangerine Transparent, 128AVSF Aventurine Green

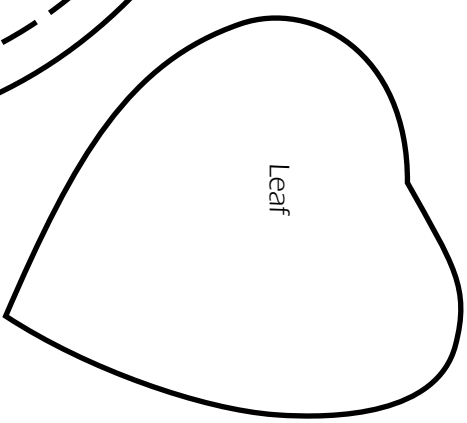
Stringer: 226-74SF Amazon Green



Project Guide



Stem



Leaf

Cutting Order

———— = Layer #1

----- = Layer #2: first cut

----- = Layer #2: second cut

..... = Layer #2: remaining cuts

Harvest Pumpkin Cutting Guide

Project Guide

Rainforest • Dish

Glass Cutting: **Simple curved lines**

Firing: **Full fuse base, Tack fuse detail, Slump**



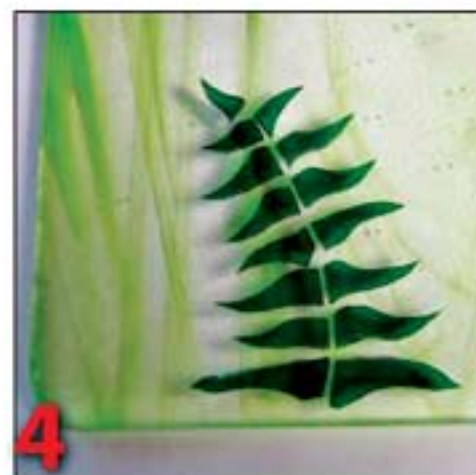
Base: Cut a piece of Amazon Wispy and another of Clear the size of the mold you're using. Full fuse using a bubble squeeze. This gives a beautiful, 2-layer base on which to create the decorative layer.



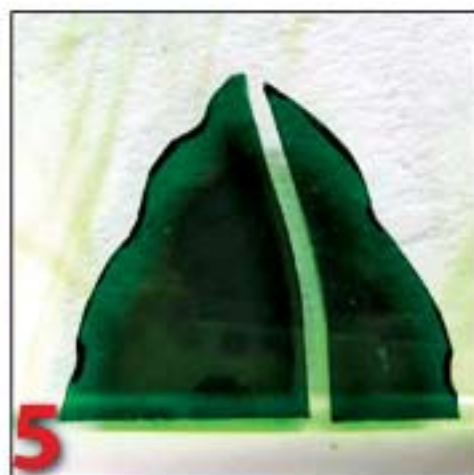
Ferns: Cut several widths of strips that taper wide to narrow – about 1-inch at the widest and around 3/8-inch at the narrow end. (Do this with all the shades you intend to create ferns with.)



Nip the strip, slightly angled from the edge, with the nipping wheel centered, to get a *very thin* triangle that curves. Turn hand *slightly* and nip in the other direction. Not all cuts will yield a useable piece; just keep nipping until you have created a generous supply to pick from as you build your ferns.



Place two well-matched leaves on either side of an imaginary stem. Build fern with widest leaves at the bottom, narrowest at the top keeping them equal distance from the "stem." Try to create graceful bends as you build each fern. Add small tip at top.



Leaves: Cut a basic leaf shape then slice through it in an arc to create two halves. Nibble the sides with nippers to create the organic "ruffle" of the leaf. Arrange on base in between ferns — add Aventurine Gecko CutUp if desired. Tack fuse. Slump.

Materials We Used

Base: Cut to mold size, 100SFS Clear and 402-94SF Amazon Wispy

Glass Colors: 100SFS Clear, 121SF Light Green, 123SF Medium Green

Mold: Creative Paradise #GM-68

Tips & Tricks

This is a good example of designing around a mold. The center slump area was kept clear and the Gecko "crawls" out of the well.

Variations

Use the fern motif in other ways such as this vase, draped over Slumpy's mold # SS720.





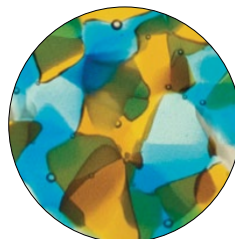
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Project Guide

Reactive Gem Tones

Glass Cutting: **Straight lines**

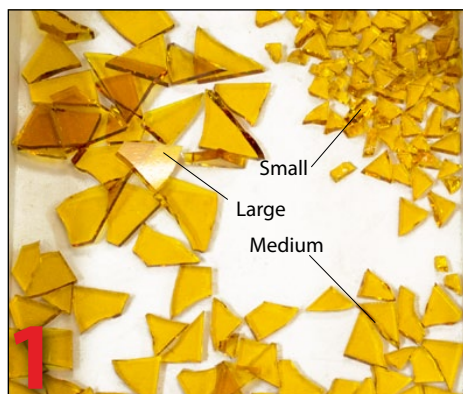
Firings: **Full Fuse + Slump**



Close-up of reaction

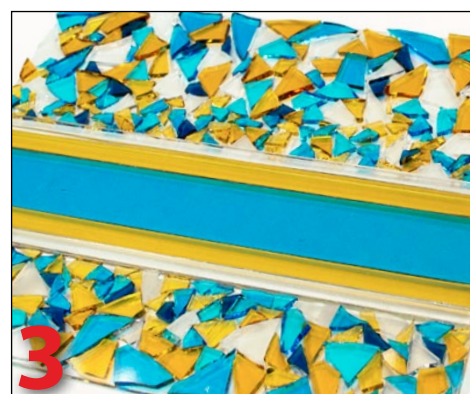


When glasses made with copper (which many blues and greens contain) are fused next to glasses made with sulfur (many warm hues) a subtle, but lovely, reaction occurs along the edges. To demonstrate this we created a piece using our range of Aqua Transparents paired with our Amber Transparents (but there are many combinations that react in this way). With the help of the Patty Gray Dam Mold lined with a piece of PAPHYROS®, a "scatter platter" type design that shows off this reaction is easily contained and comes out of the kiln with smooth edges on all sides.



Preparation

- Gather your glass selection.
- Line the (kiln-washed) mold with an 8 x 10-inch piece of PAPHYROS. Set the Clear Base into the mold (nip the corners slightly, if necessary, so that it lays flat in the mold).
- Cut strips of varying widths from each of the colors in your palette and nip into small, medium, and large sized pieces. It's easiest to keep colors separate in small containers.



Cut one 1¼ x 10-inch strip of 533-2SF Blue Topaz, two ¾ x 10-inch strips of 110.4SF Light Amber, two ¼ x 10-inch strips of Clear, and one 2½ x 10-inch strip of Clear. Arrange the five strips as shown, then add the large Clear strip on top, as the third layer of this section.

Arrange a single layer of glass nips that covers the entire base. We used small pieces near the striped elements building to larger pieces on both the top and bottom edges to create additional interest. Using Monterrey Spirit™ adds a small amount of opalescence into the mix, which helps to reflect some of the light and color within the piece. Use it liberally on the bottom layer and less in the subsequent layers.



Build a second layer of nipped pieces, paying careful attention to areas where colors will overlap creating new colors and/or a reaction. (Clear pieces are used liberally in this layer to add depth and distort colors below.) The second nipped layer should not cover the glass below uniformly – spaces are necessary to control the total volume of glass and encourage distortion.

Even more glass is strategically placed on top of this layer, again using lots of clear. Note that the layers of the nipped glass will compress and melt together when fused; even if your nipped section stacks a bit higher than the level of the striped section, they will be approximately equal once fused.

Full fuse using the suggested schedule. Slump as desired. We used Master Artisan #MSS 812 stainless steel scone mold.

Firing Schedule Used

Seg.	Ramp (°F per Hour)	Goal Temp (° F)	Hold (Minutes)
1	250	250	30
2	250	1050	60
3	250	1250	30
4	250	1350	30
5	300	1465	20
6	9999	950	60
7	200	800	10
8	300	100	0

Materials Used

Patty Gray Dam Mold #GM110 by Creative Paradise
PAPHYROS® Kiln Shelf Paper

System 96 Glass:

- Clear 8 x 10 Base
- 533-1SF Sky Blue
- 533-2SF Blue Topaz
- 533-3SF Deep Aqua
- 110.2SF Pale Amber
- 110.4SF Light Amber
- 110.8SF Medium Amber
- Spirit/410-7SF Monterrey
- Clear



Project Guide

Retro Squares ■ framed trivet

Glass Cutting: **simple straight lines**

Firing: **full fuse**

Recommended Accessories: **trivet frame**



Step-by-Step

1. If you plan to use the trivet frame, make your Blank 3/8" smaller: cut 3/8" off two adjoining sides to retain square shape.
2. Cut various-sized squares and rectangles from an assortment of transparent and/or opal colors. Don't worry about accuracy—quirky shapes are part of the appeal.
3. Place the largest shapes on the Blank in a pattern you like. Fill gaps larger than 1/4" but don't worry about smaller gaps.
4. Once you have a pattern you like, affix each shape to the Blank with a pinpoint of glue.
5. Affix smaller shapes on top of some or all of your shapes.

Variations

- This is a great look for any square or rectangular project, such as trays or coasters.
- Try using all opal colors or all transparent colors—or for a subtler effect, various hues of one color, such as dark blue on turquoise on pale blue.

Technical Tip: "Round" Squares

Heated long enough, glass will gravitate toward a ROUND shape about 1/4" thick. We can use this tendency to create wonderful effects. A square with straight-cut edges will "soften" at the sides when fully fused, to form a lovely rounded shape. Smaller squares will turn into round dots; "dots" of Rod will tend to form flat-bottomed balls.

Materials We Used

Blank: 8" square, clear

Glass Colors: assorted transparent and opal

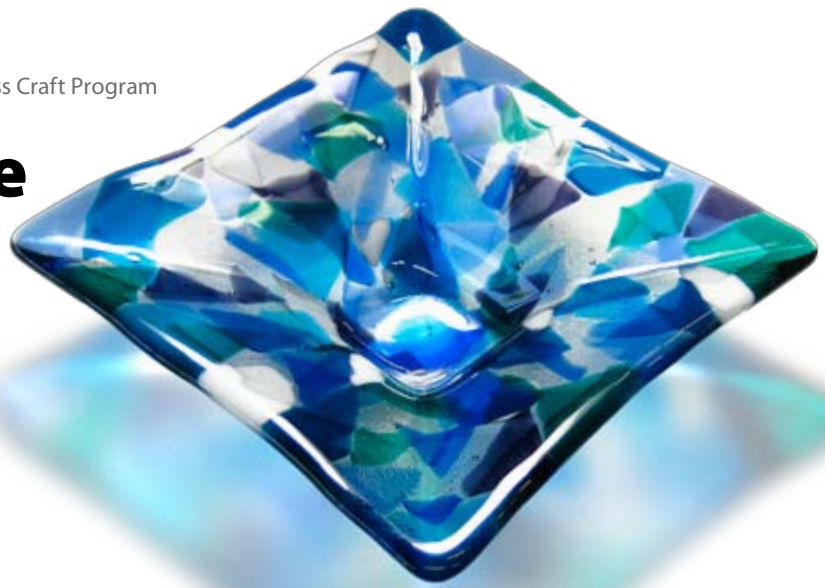
Assembly





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Project Guide

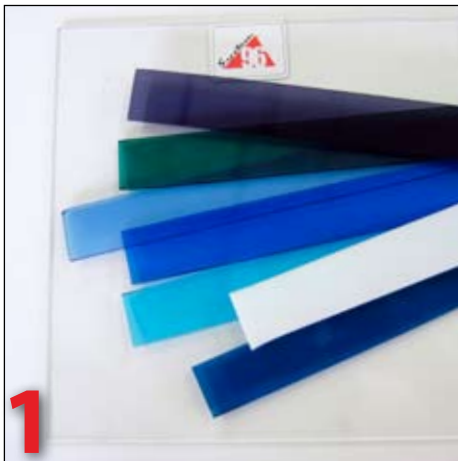


Scatter Platter

Glass Cutting: **nipping**

Firing: **full fuse, slump**

This simple technique produces dramatic — “glassy” — results!



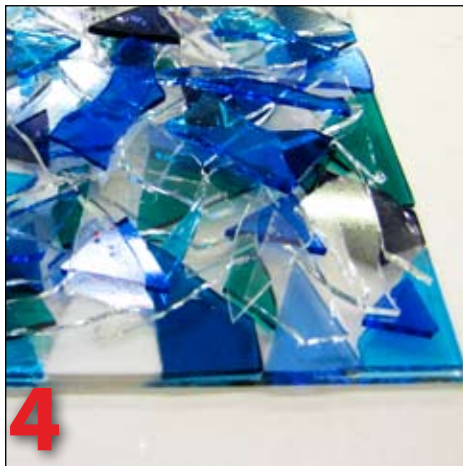
1
Begin with 8-inch Clear Base and a Transparent color palette of your choice plus Clear. (Note: a small amount of neutral Opal helps reflect color.)



2
Spread KlyrFire on the Base. Beginning at the outer edges, place organically nipped pieces around the perimeter, then center. (Use Clear liberally to add “windows” and depth, use your Opal sparingly.)



3
Now build a third layer, scattering/overlapping color randomly and using lots of Clear. Affix with pinpoints of glue if necessary or desired.



4
Add a fourth layer in the same manner, keeping glass at least 1/2-inch away from the edge to preserve shape when fused. Full Fuse. Slump into a deep mold for dramatic reflection.

Materials We Used

Base: 8-inch Clear Square

Glass Colors: 130.8SF Pale Blue, 132SF Light Blue, 533-1SF Sky Blue, 533-3SF Deep Aqua, 523-2SF Teal Green, 543-2SF Grape, 200SF White, and 100SFS Clear. (System 96 Nippits™ work great in this project.)

Tips & Tricks

This is a beautiful way to take advantage of the transparent character of glass by overlapping colors to create new shades between them. Remember, colors get darker when they overlap, so use lighter colors mixed with ample clear.



Project Guide

Semi-Ruffles

- cereal, salad, or knick-knack bowl

Glass Cutting: **simple, straight lines**

Firings: **contour fuse, slump**



Step-by-Step

1. Center the CutUp™ on your white Blank and affix with a pinpoint of glue.
2. Glue Chips evenly around the perimeter, placing each one at the very edge. Create “Rod Dots” by nipping the Rod into 1/4” or shorter pieces with glass nippers. Glue one Dot in the center of each Chip, nipped side down.
3. With a cotton swab, spread Klyr-fire onto the surface of your Blank where you plan to add pieces of Stringer. This will hold them in place while you move them to suit your fancy, and won’t leave glue residue on your project. Break random length pieces of Stringer and arrange them to suit you.

Variations

- Any CutUp and color scheme will perform similarly for this project. Make a set of bowls, using a different CutUp for each one.
- Instead of Stringer in the interior space, use pieces of coarse Frit. They’ll fuse into interesting rounded shapes.

Materials We Used

Blank: 8” Round, 200SF White

Chips: 24 1009SF Black

Rod: Amazon Green Opal

Stringer: Black

CutUps™: Amazon Green Blob

Note:

Chips = 1/2” glass squares

Assembly



Technical Tip: Semi-Ruffled Edges

For this project, we take advantage of a characteristic of melting glass: thicker layers hold their form when fired, whereas a single layer of glass tends to draw inward. Spacing decorative items along the edge creates alternating thick and thin spots, encouraging the glass to form an attractive wavy edge.



Project Guide

Slice of Life ■ serving platter

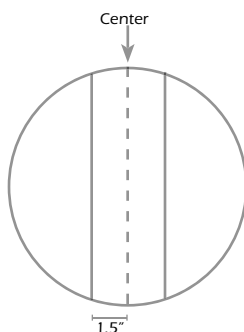
Glass Cutting: **straight lines, simple curves**

Firings: **full fuse, slump**



Step-by-Step

1. Find the center of your black circle and mark it. Draw a straight diameter line through the center with a Sharpie.
2. Measure 1.5 inches on both sides of that line and draw parallel lines. Cut, and remove the center section.
3. Cut a 3 x 11" piece of Spirit glass with the "grain" of the glass running lengthwise.
4. Reassemble the two black pieces and the Spirit piece on top of your clear base Blank. Mark the Spirit glass to match the edge of the clear Blank and cut off the excess.
5. Full fuse, then Slump if desired into a shallow bowl mold.



Materials We Used

Blanks: 10" clear round and 10" black round

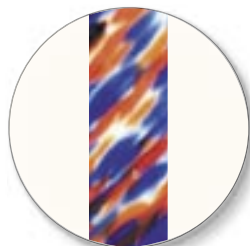
Glass Colors: "Murano" Spirit glass (#Spirit/4001SF)

Keys to Success

This design owes its attractiveness to the interplay between the multi-colored center glass and the surrounding solid color. Hold glass pieces up together to see how you like the effect.

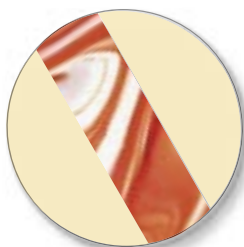
Variations

Use this simple but effective technique to generate a multitude of combinations—change size, color, pattern...make a set of coordinated variations! If your cutting skills are up to it, the side arcs can be cut from any color of Sheet glass. (Use two Sheets for 10" or 12" projects—just one for an 8" project.)

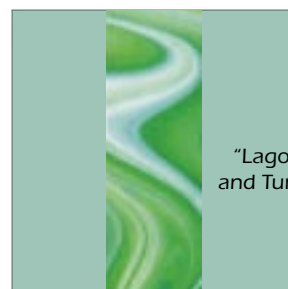


"Philly" Spirit and White Blank

"Godiva" OpalArt and Almond Blank



"Geneva" Spirit and arcs cut from Cotton Candy Pink (opal) or Pale Purple (transparent) Sheets



"Lagoon" OpalArt and Turquoise Green



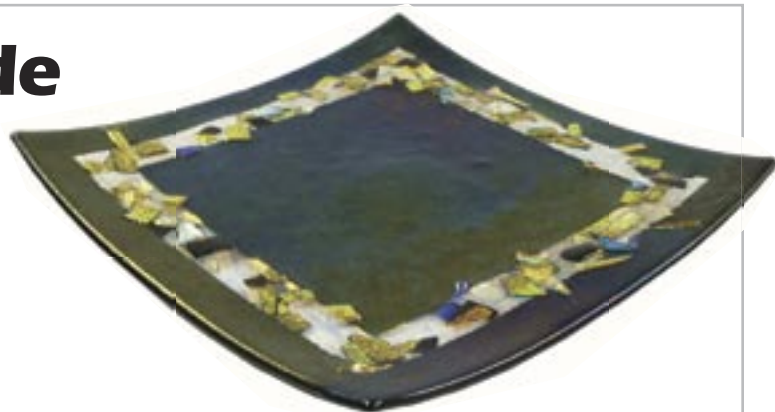
Project Guide

The Space Between

- sushi plate, tray

Glass Cutting: **simple straight lines**

Firings: **full fuse, slump**



Step-by-Step

1. Cut four rectangles from an opaque Sheet, 1 x 7" each. Also cut a 4" square from the same color.
2. Affix the 7" rectangles to the edges of your clear Blank with pinpoints of glue. Then add the 4" square to the center.
3. Fill the empty trough with a mixture of transparent Frits: use any or all Coarse, Medium, or Fine.
4. Now, have fun with your nippers! The space between opaque areas is your canvas to fill with bright, interesting shapes.

Keys to Success

By using clear for our base, we have created a "window" that will transmit light. **Transparent** colors will look great through the clear, and **opal** colors will layer well over the dark background.

Variations

- Use Dichro to add pizzazz to your design.
- Add a CutUp as a central design focus.

Materials We Used

Blanks: clear 8" square

Glass Colors: one dark opaque and various accent colors

Frit: one or more transparent colors

Pre-Firing



Technical Tip: Layering Glass

All your design elements don't need to lay flat—it's OK to overlap. If your project will be FULL fused, the overlapping layers will merge into one. Just don't get carried away and make "towers" of glass or stand up a piece of Rod higher than about 1/4".



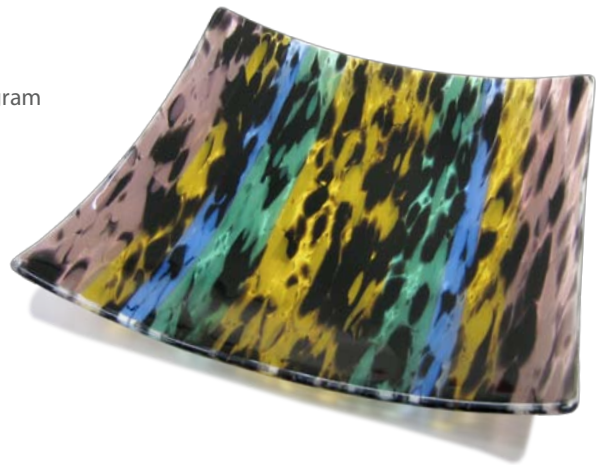
Spectrum Glass presents: The System 96® Glass Craft Program

Project Guide

Spirited Colors ▪ Dish

Glass Cutting: **Simple straight lines**

Firing: **Full fuse, Slump**



Design fusing projects with a whole new twist using Clear-based System 96® Spirit™ glass. This elegant, yet playful plate combines strips of translucent pale colors with a base layer of Murano Spirit for a customized effect.



Cut one 10 in. x 10 in. piece of Murano Spirit SPIRIT/4001SF. Then cut the colored bands, or strips for the top layer of the plate, using the dimensions listed below.



Arrange the color strips as shown in the photo. Note: the design works best when the vertical color strips run parallel with the direction of the flecks of opal color in the Spirit glass.



Attach the color strips on top of the Spirit base using "pinpoints" of glue. Fuse using a "bubble squeeze" program to minimize trapped air bubbles. (See below.)

Materials We Used

Base: 10-inch square of Murano Spirit

Glass Colors:

Two 10 in. x 1-1/4 in. strips of Pale Purple 140.8SF

One 10 in. x 2-1/2 in. strip of Pale Amber 110.2SF

Two 10 in. x 3/4 in. strips of Pale Amber 110.2SF

Two 10 in. x 1/2 in. strips of Pale Blue 130.8SF

Two 10 in. x 1-1/4 in. strips of Sea Green 528-1SF

Molds: Works with both Creative Paradise mold #GM08, and Slumpy's mold #SM-9504

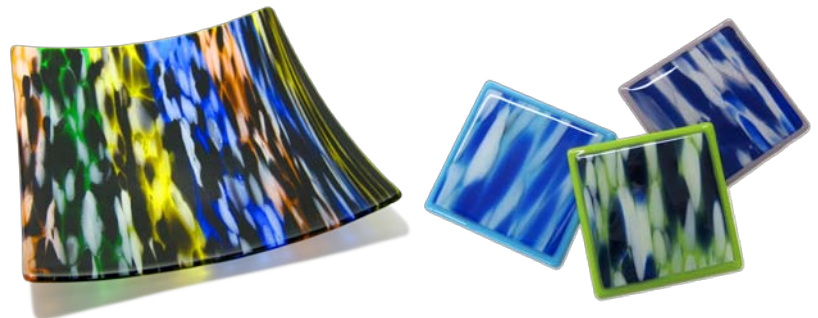
Variations

Experiment with color, i.e., we found that when using Murano, pale colors worked best on top of the Spirit pattern while bolder colors were used more effectively underneath the Spirit. Either way, clear patches in the sheet are actually little windows of color opportunity.

The most obvious choices tend to be Murano and Monterrey because of their neutral palettes, but as the coasters below further illustrate, with a little imagination any Clear-based Spirit can be used to give even small designs a big personality. There are six exhilarating choices of Clear based Spirits in all.

Firing Schedule

Seg.	Ramp (°F per Hour)	Goal Temp (° F)	Hold Time (Minutes)
1	300	1130	60
2	200	1370	20
3	400	1475	10
4	9999*	950	60
5	150	800	10
6	300	100	0



Above left: Brighter palette strips work well placed underneath the Murano. Above right: The blue in the Atlantis Spirit plays with the colored opal bases on these fun coasters.

Project Guide

Spring Owls

Glass Cutting: **Pattern Cutting**
Firing: **Contour Fuse + Slump**

Please see
System96.com for the
Cutting Guide

Whimsical and bright, this little dish is perfect for some fusing fun at any time of the year. The Clear area in the center gives the appearance of depth as the bird shapes sink into it.



- Gather your glass selection. (See Materials Used.)
- Set the 6-in. x 6-in. Clear in the center of an 8-in. x 8-in. 200SF White Base leaving 1-inch gap all around for border.
- Trace and cut body shapes of birds. (Short Owl = Pastel Green, Tall Owl = Lemongrass.)



Using the Cutting Guide on page 2, trace & cut four White circles for eyes. Trace & cut eyebrows and wings for each bird (Short bird = Turquoise Green, Tall bird = Amazon Green). Nip beaks from a small piece of Orange Opal.



Optional Tip: to keep the eyebrows and wings from sagging where they extend past the Owl's body, we recommend that you give them "invisible support." To do this, trace and cut the Clear Support Pieces as shown on the Cutting Guide. When all the Clear pieces are cut and in place, add the eyebrows and wings back on top of them.



Create a border. We used 1-in. x 3/8-in. strips of all the project colors plus a stacked square in each corner, but you can create any type of border you choose. The 1-inch channel around the perimeter gives you a perfect space to add some color and design as you build up its second layer.



Add Black Pebble™ eye centers, Orange Noodle feet, and the tail feather details. Have fun, this is where you create the personality of your birds!

Contour fuse using the suggested schedule. Slump in a shallow square mold such as BI's SM9503.

Firing Schedule Used

Seg.	Ramp (°F per Hour)	Goal Temp (° F)	Hold (Minutes)
1	250	250	30
2	250	1050	60
3	250	1250	20
4	250	1350	20
5	300	1400	10
6	9999	950	60
7	200	800	10
8	300	100	0

Materials Used

PAPYROS® Kiln Shelf Paper

System 96 Glass:

- 8-in. x 8-in. 200SF White Base
- 6-in. x 6-in. Clear Base
- 222-72SF Pastel Green
- 226-74SF Amazon Green
- 226-72SF Lemongrass
- 223-72SF Turquoise Green
- 200SF White
- 100SFS Clear
- 60-2702-96 Orange Opal
- N-2702-96-5 Orange Opal Noodles
- X-PEB-1009SF Black Pebbles™



Project Guide

Starry Night ▪ platter or light shade

Glass Cutting: **simple straight lines**

Firings: **contour fuse, slump optional**

Accessories: **rubber washers** (see Variations)



Step-by-Step

1. Cut four 3.5" squares: two from the black sheet, and two from the white.
2. With pinpoints of glue, affix squares in the center of your Blank, leaving space around the edges for a row of Chips.
3. Using pinpoints of glue, add Chips around the edges and your two CutUps.
4. Contour or Full fuse (see Keys to Success, at right).
5. If desired, slump into shallow bowl mold.

Variations

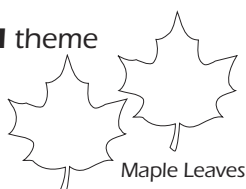
After slumping, use a diamond drill bit to make a hole in the center. Use your creation as a dramatic shade for a ceiling light! Use a couple of little rubber washers to protect the glass when screwing into place.

Consider these "pairs" of CutUps and what colors would look great with them:

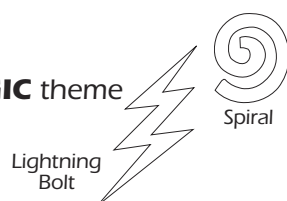
SEA theme



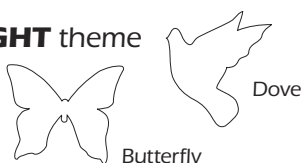
AUTUMN theme



MAGIC theme



FLIGHT theme



Materials We Used

Blank: 8" clear square

Glass Colors: Black 1009SF, White 200SF

Chips:

- 28 - Med. Blue opal 230-72SF
- 4 - opal Yellow 260-72SF
- 12 - black1009SF
- 12 - white 200SF

CutUps™: white Star and Crescent

Note:

Chips = 1/2" glass squares

Keys to Success

Repeating colors in different forms tie this design together.

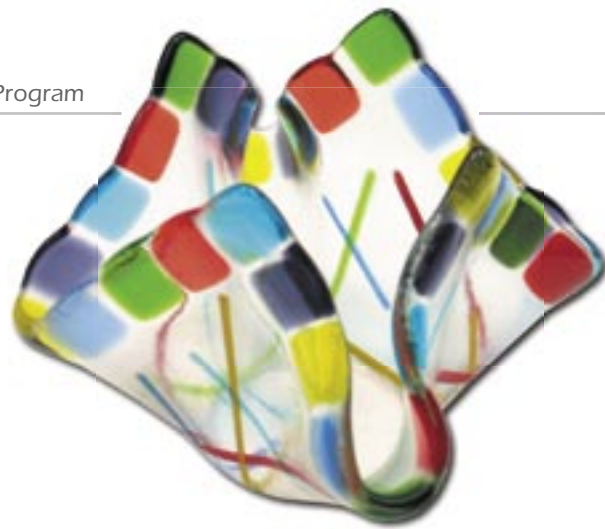
Fusing choices:

- CONTOUR fuse will retain dimension on the CutUps.
- FULL fuse will produce the smoothest edges.
- FULL fuse without CutUps, then TACK fuse for the CutUps is the best of both worlds!



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Project Guide



Summer Sparkler ▪ votive holder

Glass Cutting: **simple straight lines**

Firings: **contour fuse, slump**

Step-by-Step

1. With a pinpoint of glue, affix Chips around the edge of the Blank. Leave a little “breathing room” between each one, and align them with the very edges of the Blank.
2. Break the Stringer into 3-4” lengths with your fingers or nippers. Cross them randomly in the center of your design, like “pick-up sticks.”

Don’t worry about crossing Stringer; the pieces will melt completely into the surface. Add a few strategic pinpoints of glue to keep your design in place on its trip to the kiln.

3. Contour fuse for attractive dimension.
4. Slump over a kilnwashed stainless steel tumbler.
5. Add light!

Keys to Success

- Normally, you leave the center of the votive Blank free of design elements, so the bottom stays flat. In this design, it’s not necessary because Stringer will melt completely into the Blank, even at Contour temp.
- Take a last peek at your project before closing the kiln and adjust any stray Stringer if necessary.
- Leaving space between edge Chips and fusing at Contour or Full fuse level will create a bit of a “ruffle” at the edges of your finished project. It looks great!

Materials We Used

Blank: 6” clear square

Chips: 32 in half a dozen summery colors

Stringer: in assorted matching colors

Note:

Chips = 1/2” glass squares



Project before slump.



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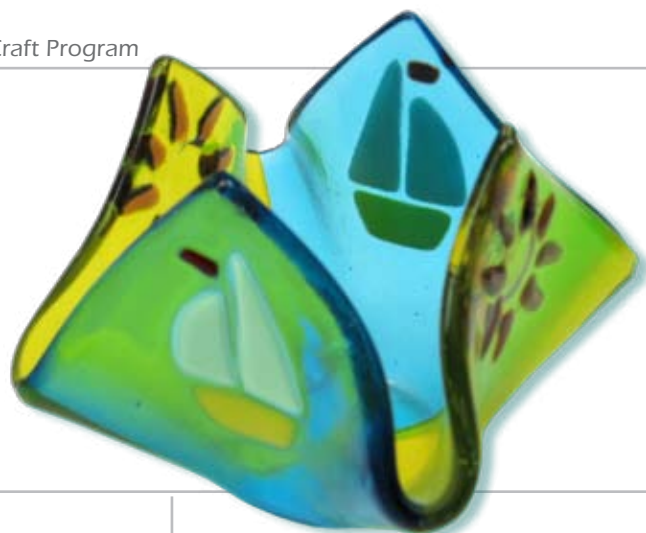
Project Guide

Sunny Sail ▪ votive holder

Glass Cutting: **simple straight lines**

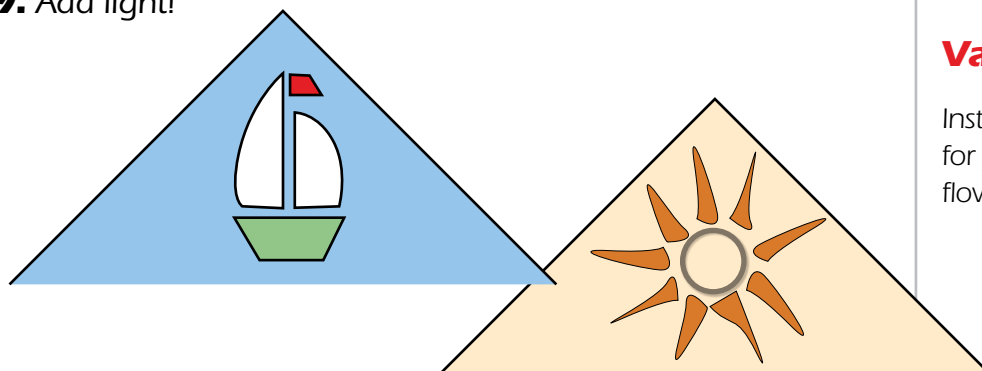
Firings: **contour fuse, slump**

Accessories: **tea light**



Step-by-Step

1. Cut two 3" squares from the blue Sheet and two from the yellow, and affix at opposite corners of your Blank with pinpoints of glue.
2. Cut two 1/2" diameter circles from the fiber paper with scissors. For now, place the circles (without gluing) at the outside corners of the yellow squares, as shown below.
3. Use the Nippers to make 15-20 sunny rays (little triangles) from the amber Strip. Affix around the circles with pinpoints of glue.
4. Cut 4 sails and 2 boat hulls from opaque Strips. Affix to the outside corners of blue squares.
5. Nip two 1/4" pieces of red Noodle for the flag, and affix.
6. Place the fiber paper suns UNDER the Blank when firing, to create an indented impression in the glass.
7. Contour fuse.
8. Slump over a kilnwashed stainless steel tumbler.
9. Add light!



Materials We Used

Blank: 6" clear square

Glass colors: 533-1SF Sky Blue, 161SF Yellow

Strips: 110.8 Medium Amber and two opalescent "sailboaty" colors

Noodle: red, about 1/2 inch

Fiber Paper: 1/8" thick, about a square inch

Keys to Success

Study a finished votive and notice that the **corners** are most prominent after slumping. This is where you want to place your primary design element.

Variation

Instead of a fiber-paper impression for your sun, nip a circle from Sun-flower yellow glass.

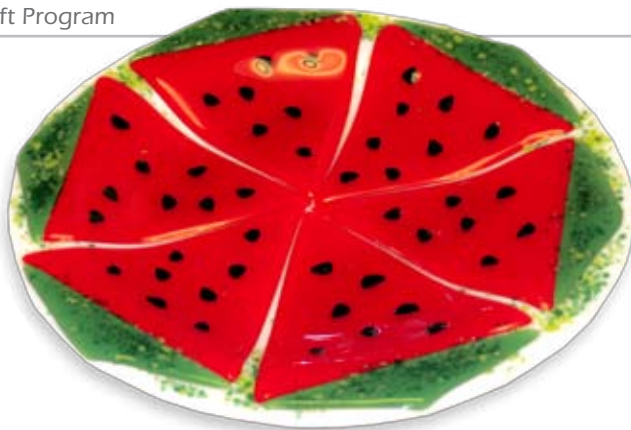
Project Guide

Luscious Watermelon

▪ fun serving plate

Glass Cutting: **simple straight lines**

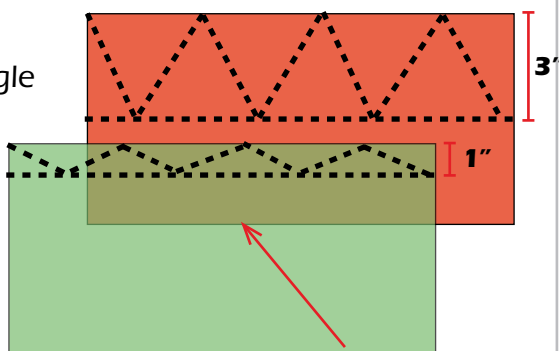
Firings: **contour fuse, slump**



Step-by-Step

1. Cut 6 lively, wide triangle shapes from the Red Sheet, as in diagram at right. (Cutting guide attached.)

Don't try to make your shapes perfect—this is a fun, whimsical piece.



2. Cut 6 slender triangles from green Sheet for "rind."
3. Affix both sets of triangles with pinpoints of glue.
4. Gently brush Klyr-Fire adhesive all over your piece. Sprinkle some fine Green frit onto the rind for texture and interest.
5. Select coarse Black Frit in "seed" shapes and drop onto the watermelon slices. The Klyr-Fire will hold them in place.
6. Contour fuse, then slump into a shallow, rimless plate.

Materials We Used

Blank: 8" white Round

Frit: coarse Black. several shades of Green in fine and/or medium

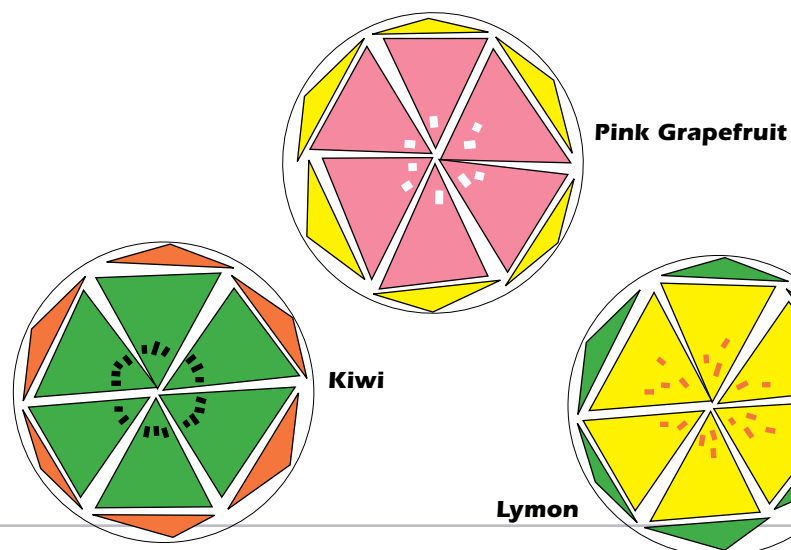
Glass Colors: 151SF transparent Cherry Red, 526-2SF Moss Green

Frit: coarse Black

Keys to Success

Don't shoot for precision. The charm of this piece is its whimsical imperfection.

Pre-Firing



Project Guide

Whimsical Vases ■ window or wall decor

Glass Cutting: **simple curves**

Firing: **contour fuse**



Step-by-Step

1. Build your frame on a Portable Assembly Surface* or kiln shelf covered with Thinfire paper.
2. Cut a vase shape approximately 9-inches long. (Use Cutting Guide provided or create your own design.)
3. Trace the shape of the top inch or so of the vase's neck onto a small piece of Clear glass. Cut out shape and place underneath the vase aligning with its neck.
4. Hanging Loop: Cut a ¾-inch piece of 18-gauge copper wire and twist it into a loop as shown in the diagram. Place between the vase and the clear piece from Step 3. (Make sure loop hangs over edge of glass!)
5. Decorate the vase as desired.
6. Flower: Cut a rough octagonal shape approximately 2½ inches in diameter from Clear glass. Using pinpoints of glue, build a Pebble flower on this base as shown in diagram.
7. Flower Channel: Cut a 1/8"x 4" strip of fiber paper. Center strip lengthwise on a 2 x ½" strip of Clear as shown in diagram. Dot fiber strip with glue and carefully position the flower on top. IMPORTANT: Be sure the fiber strip extends beyond the glass on both sides. This creates a channel through the flower that will be used for hanging.
8. Contour fuse.
9. Finish: Cut an 8-inch length of 18-gauge copper wire. Curl wire whimsically, add beads if desired. Attach one end of this wire to the embedded loop, twisting it securely. This forms the center wire. Cut a 20-inch wire and thread it halfway through the embedded loop and twist in place to create the two outer wires. Curl these and add glass beads, as desired. Make a small loop at the top of the center wire. Thread an 18-inch length of fishing line through the channel in the flower and tie it securely to the center wire loop. Make a small loop on the other end of the fishing line to hang.

Materials We Used

Glass Colors: Your choice

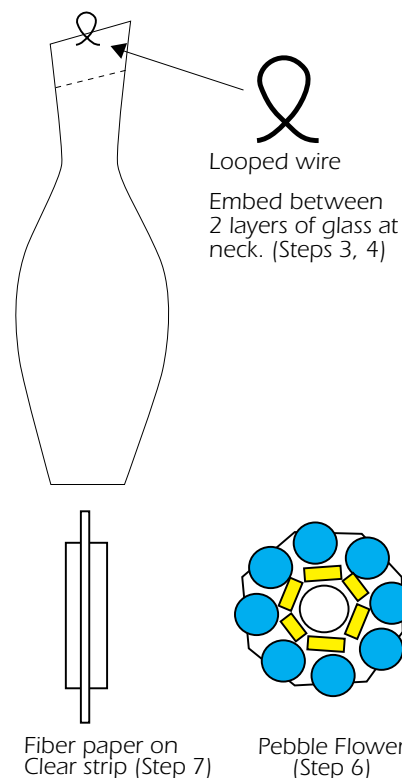
Pebbles: Sky Blue, White

Fiber Paper

Wire: 18-gauge copper

Note:

***Portable Assembly Surface**
= an unglazed ceramic tile used to support a project that has no Blank.



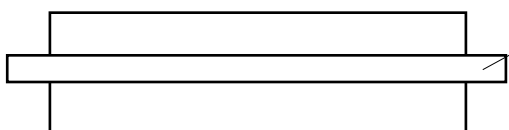


Spectrum Glass presents: The System 96® Glass Craft Program

Project Guide

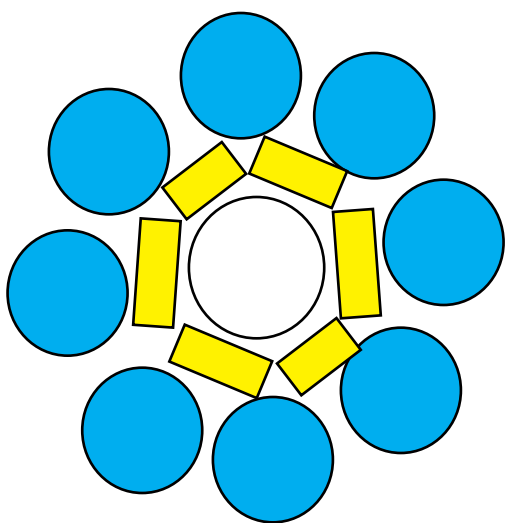
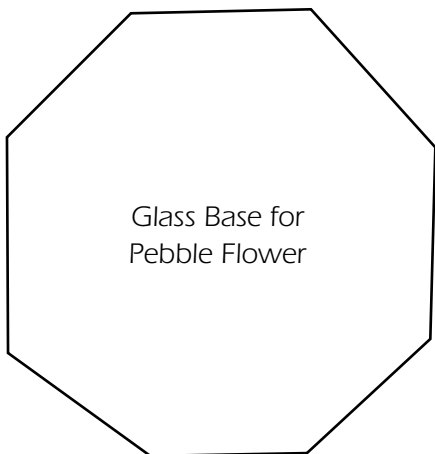
Whimsical Vases ■ Cutting Guide

Channel Diagram



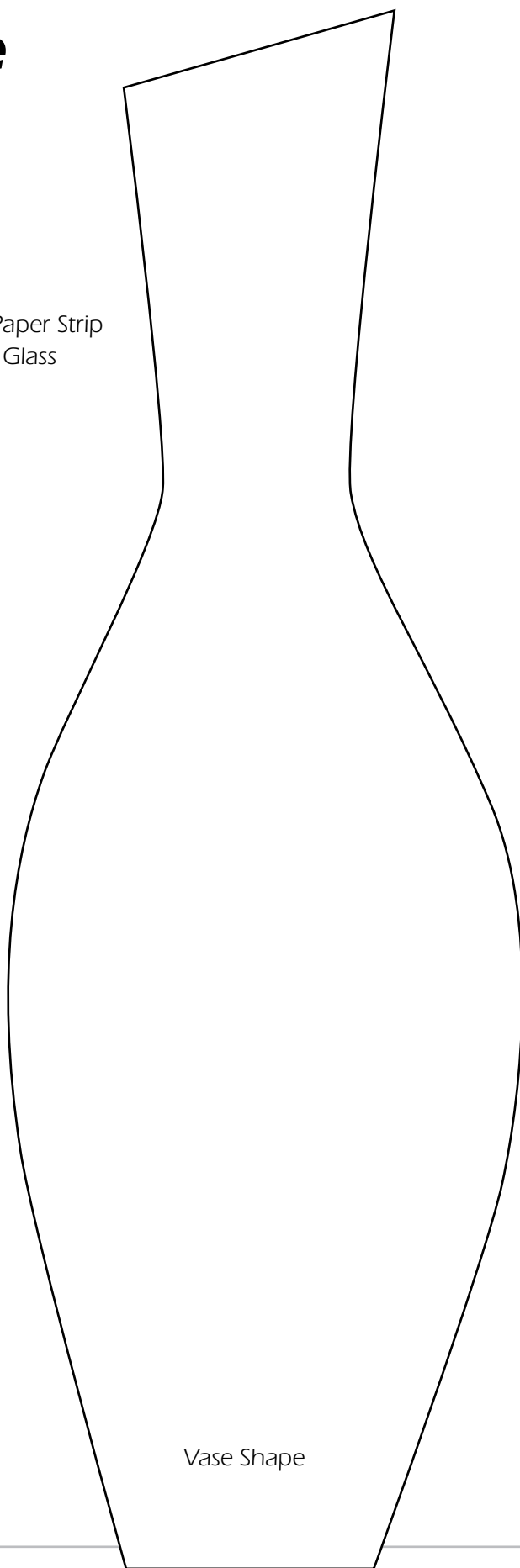
Fiber Paper Strip
on Glass

Glass Base for
Pebble Flower



Pebble Flower

Vase Shape



Project Guide

Woven STRIPES™

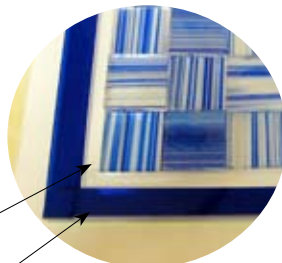
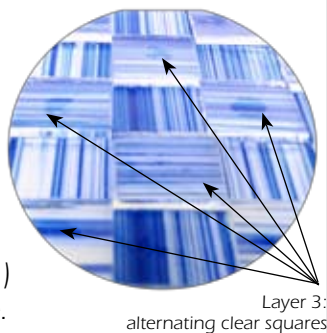
Glass Cutting: **simple straight cutting**

Firings: **full fuse**



Step-by-Step

1. Begin with 8-inch 100SFS Clear Project Base.
2. Cut 36 one-inch squares from Vienna STRIPES, "squaring up" the direction of the STRIPES as much as possible. Cut 18 one-inch squares from 100SFS Clear.
3. Arrange the STRIPES squares in a grid on the Clear Base, alternating the direction of the striped pattern. (Keep the striped side of the glass down for added depth.) Place a clear square on *every other* STRIPE square in a checkerboard fashion. (This creates the "woven" look when fused.) Secure each square with a drop of Klyr-Fire.
4. Cut four 1/4-inch x 7-inch strips from Clear and eight 1/2-inch x 8-inch strips from Light Blue.
5. Lay the clear strips around the "woven" squares, measure and trim to fit. Lay four of the blue strips around the clear strips, measure and trim to fit. Stack a second layer of blue strips on top of the first layer of blue strips, staggering seams (see Keys to Success). Measure and trim to fit.
6. Full fuse.
7. Slump into 8" square mold.



Border Layout
(stacked on top of base)

Materials We Used

Project Base: 8-inch Clear

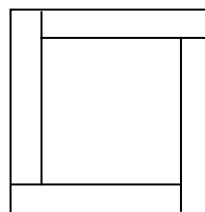
Glass Colors: 132SF Light Blue, 100SFS CLEAR

STRIPES™:

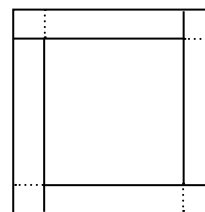
STRIPE/431-76SF Vienna (Clear-based colors work best.)

Keys to Success

Staggered Seams: The second layer of the outer border color is what gives a smooth and seamless edge to your piece. By staggering where the seams fall and using an extra layer of glass (3 total including Base), your border comes out sleek and glossy!



Border Layer 1



Border Layer 2

Variations

Use different color schemes, vary the size of the squares or border, or even leave off the top layer of alternating clear squares for a more linear, geometric look.

