

### **VERBEEK GLASS STUDIO**

We are a full-service kiln-glass studio, gallery, and gift shop in the historic Factory East warehouse in Toronto's Leslieville neighbourhood.

Since 2018, we've helped over 3,500 people of all ages discover their creativity through glass-fusing workshops.

We run weekly workshops (from family-friendly projects to team-building events), offer open-studio time and teach advanced kiln forming, sculpting and casting; and, have a popular glass gift shop filled with unique studio-made gifts.



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**YOUR SAFETY:** Given the range and variables with each fuser's materials, workspace, kilns and glass practices, we cannot prevent the actions taken by, nor guarantee the safety, of any individual consulting this eBook. These instructions are based on our informed experience but cannot guarantee successful outcomes for any glass projects you undertake as a result.

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# WHY I BEGAN GLASS MAGIC BOOKS

I'm grateful for the growing body of glassfusing knowledge built through the shared experiences and generosity of artists worldwide.

I also benefit from meeting so many people through my workshops; sharing, laughing and often discovering new things about fusing.

With *Glass Magic Books*, I also aim to share what I've learned and to present glass fusing in new and more visually engaging ways.

Yet, my ultimate goal remains the same: to help show adults that they **can** re-discover their youthful creativity. Glass fusing just happens to be a perfect way to do that!

### **CREATIVITY**

Creating is a life-long journey of discover and self expression and, key to that, is learning to trust and grow our creative instincts.

So, I urge you to challenge some of the old and typical fusing methods that we all know and practice. Stop, and ask yourself...



#### WHAT IF I ...?

- Change the order of steps—or turn the glass upside down?
- Pre-fuse parts before assembling the rest?
- Fuse, smash, mix, and re-fire?
- Design for me, not for others?
- Borrow methods from other art forms?
- Trust my instincts, even when it feels counterintuitive?
- Try one of my wild ideas—or all of them?

The real magic of glass is self discovery!

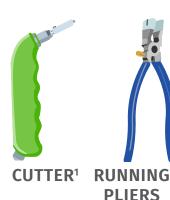


**Layne Verbeek** is an award-winning Canadian sculptor and glass artist. His work includes sculpture, custom installations and wall art.

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# **TOOLS**

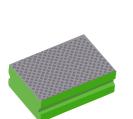




















DIAMOND PAD MINI DRILL3 WITH 1/8" **CORE<sup>4</sup> DIAMOND BIT** 

**GLASS GRINDER** 

**RING SAW** 



HAND HELD DRILL WITH **WOOD CUTTING BIT** 

<sup>1.</sup> Don't put oil in the cutter. Oils leave scale and devitrification. This is an old practice from stained glass making.

<sup>2.</sup> I paint the flat prong of the groziers red so students can quickly know which end is up.

<sup>3.</sup> The chuck on these drills wears out quickly and I often find I have to use pliers to tighten it. You can find replacement chucks on Amazon for just a few dollars. There is no need to replace the entire drill.

<sup>4.</sup> Core drill bits are hollow. This allows heat to escape and reduces the chance of cracking the glass.

# **MATERIALS**

#### KILN WASH

We kiln wash our shelves instead of using kiln paper for cost savings, multiple fusing rounds, avoiding frequent silica dust exposure to remove fired kiln paper, and cleaner firing for glass that is required to move across a kiln shelf during firing (cabochons, stacks that spread out, etc.)

#### KIIN PAPFR

We use kiln paper for assembling and easy transfer of certain ornament designs (wreaths, poinsettia).

It's also helpful for complicated designs with tiny parts that would require you to sit at the kiln for final assembly to the kiln (our skiing and skating snowmen for example).

While kiln paper costs more, it does save you the time and work to scrape and re-kiln wash shelves.

# GLUES FOR ASSEMBLING PROJECTS

Our studio uses *Bullseye Glass® GlassTac™* for most projects. We also use *Aleene's ClearGel Tacky Glue™* when we want something to glue faster (but we use smaller amounts to minimize risk of residue.)

We have had mixed experience with other common glues with some leaving residue or mineral deposits on the glass after firing.

#### **CRAZY GLUE (CYANOACRYLATE)**

Many studios and fusers use various forms of crazy glue for its practicality, but we've discontinued it due to staff members experiencing asthma-like symptoms after prolonged use.

### **CHOOSING THE RIGHT GLUE**

**Easy Designs:** For most ornaments I recommend Bullseye's Glass Tac Gel.

**Advanced Designs:** But for this and other more detailed ornaments that should be done in stages, I use Aleen's ClearGel. It glues faster saves me time waiting for glue

# OCCUPATIONAL ASTHMA AND CRAZY GLUE

Occupational asthma is an allergic reaction to inhaling the strong vapors of cyanoacrylate.

Extended exposure to cyanoacrylate can cause shortness of breath, wheezing, coughing and chest tightness.

# STAINLESS STEEL WIRE, COPPER WIRE

#### GLASS ONLY "TOLERATES" STAINLESS STEEL

While we've all heard that glass is "compatible" with stainless steel and copper, it isn't.

In fact, glass just tolerates these metals, providing you fuse only small amounts with sufficient glass. (At the surface level, stresses between the materials will arise. But if done right these will not break.)

Using wire that is too large for the surrounding glass, or not using enough glass will lead to cracks and breaks. We only use stainless steel wire for our ornaments as copper wire is softer and better used for decoration.

#### **WIRF SI7F**

The labelling of wire thickness is confusing as 20ga (gauge) wire is **thinner** than 18ga or 14ga.

**20GA:** Thin but strong enough to be fired between two glass layers as jump rings and p-hooks.

**18 GA:** Slightly thicker and good for jump rings as well as decorative wire uses (skates and skis on our snowmen) and other uses.

**14GA:** Thick and harder to bend. Its used for larger pieces such as 150-175mm (6-7") trees that are put into wood bases. It's not good for small pieces of work as the wire stress can exceed what the glass can contain.

# GLUES FOR ASSEMBLING FINISHED PROJECTS

#### TWO-PART EPOXY

There are a few fast-acting two-part epoxies that work well for bonding glass-to-glass. Ensure you use an epoxy that clearly states it dries and remains clear as many epoxies yellow over time.

Our preferred epoxy is JB Weld Clearweld Quick Setting Epoxy - Clear™. We've used it for over five years with minimal issues.

#### **ULTRAVIOLET GLUE**

Ultraviolet (UV) glue, applied and cured under UV light, is a quick and effective way to bond glass-to-glass. However, it works best when the surfaces of the glass pieces are smooth and flat (epoxy is better for uneven surfaces) and at least one of the glass items is clear or a very light transparent colour.

Note: UV light doesn't travel well through red glass and is unpredictable with other glasses that have dark tints. Our preferred UV glue is  $LOCTITE\ 349^{TM}$ , and we use a LED UV light that emits 365nm light.

# TIPS 1: MAKING ACCESSORY GLASS

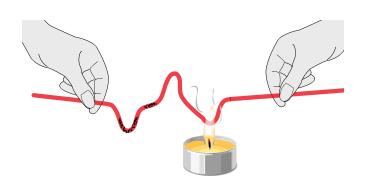
# BENDING

#### **BY CANDLE**

You can easily bend 1 and 2mm glass stringer over a candle flame.

It's easy and with a bit of practice you can make reliable shapes and patterns.

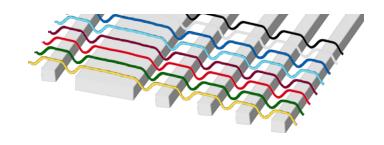
Black soot often appears on the glass. To reduce this, wipe the stringer clean before using. Otherwise, no worries it washes off and will also burn off completely during firing.



#### **BY KILN**

You can make a variety of stringer patterns by firing them over fiber board or plaster blocks.

By reducing the firing hold by 1-3 minutes affects how far the stringer dips into the open spaces and can give you design variety.



# **STRINGER**

Another way to make fun fused dots is to use stringer.

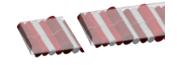
TACK FUSE stringers of your choice onto a small sheet. Then cut them into squares for full fusing.

We make these unique "peppermint" dots, varying sizes for ornaments and projects all year round.

1. Glue rows of 1-2mm stringers onto a clear sheet. Fire stringers up.

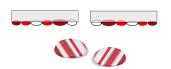
#### **CONTOUR FUSE**

2. Smooth side up, score and cut 3/8"-1/2"/6-9 mm strips into squares.



3. Place squares in kiln, clear side up.

#### **DOT FUSE**



# **REGULAR AND** LARGE DOTS

### **RELIABLE SIZING**

Dots are fun to use, but not the easiest to make. At right are common dot sizes and the glass needed to make them.

To make many dots of a specific size, score and cut a grid of same sized squares on one sheet of glass. See DOT FUSE on page 16.

Noses: I like to make oval dots for Santa and gnome noses. Do this by cutting a rectangular piece instead of a square.

**Big Dots:** Make large, 11/4" / 30 mm dots, that can be cut in half for Santa, gnome feet.

Large dots don't always fully fuse round; trimming and placing them as shown at right may help.

### EASY DOT **CLEANING**

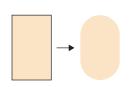
We've all experienced frustration when removing fresh projects from the kiln only to find white silica stuck to the bottom of pieces.

This issue is particularly prevalent when firing dots where the glass has to move along a shelf to rise up to 6mm.

**Simple food-grade citric acid** is a fuser's best friend. A quick, five-minute soak does the trick. This works on any fired glass, large or small!

DOTS - INCHES			
DOT SIZE	SQUARES TO FUSE		
1/8"	1 Coarse Frit		
3/16	1⁄4" square		
1/4	3/8"		
3/8	1/2"		
1/2	2 x ½"		
3/4	2 x 5/8" or 4 x 1/2"		
1	2 x 1/8" or 4 x 5/8"		
11/4	3 x 1" or 4 x ¾"		

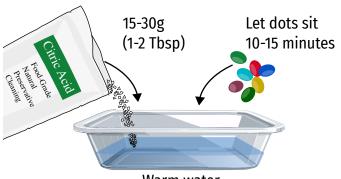
DOTS - MILLIMETERS			
DOT SIZE	SQUARES TO FUSE		
3mm	1 Coarse Frit		
6	9mm square		
9	12mm or 2x 6mm		
12	15mm or 2 x 9mm		
15	3 x 12mm		
20	25mm or 2 x 15mm		
25	2 x 20mm or 4 x 15mm		
30	2 x 25mm or 3 x 20mm		



1. Oval Dots.



2. Large Dots: Stack in 45° turns. Nip corners to reduce glass needing to travel.



Warm water

# TIPS 2: CUTTING GLASS

# THE RULE OF HALVES

We've all faced the frustration of running one or more strips of a larger piece of glass.,

Instead of following your scorelines, the cracks veer off to one side. You try again, it fails again and you waste more glass.

#### WHY?

We forget the "rule of halves." Glass has a mind of its own and to it, a score is just a "suggested path".

If it's not near the center of the sheet, the running glass will likely ignore the score and run towards the narrower side of the glass.

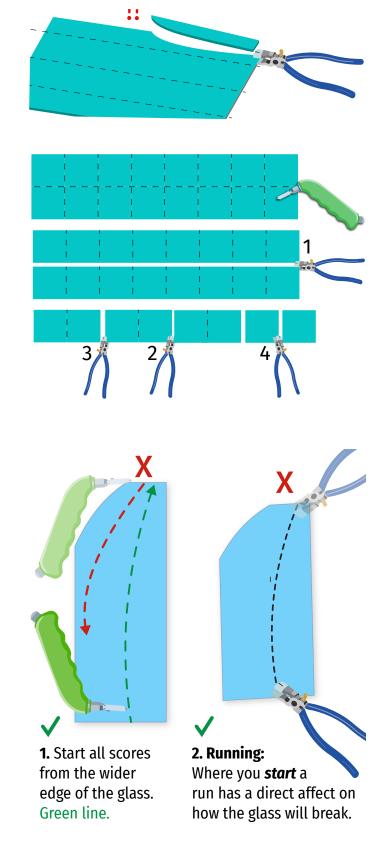
For Single Strips: cut off 1/4 or 1/3 of the sheet, score at least two strips of the size wanted, and use one.

**For Multiple Strips:** always run the center score first, then split each new piece in half until you reach your desired widths.

# 2 RUNNING PLIER PLACEMENT

A common thing I point out to my students is that if you have a score going between thin and thick ends, its best to run the score from the widest end.

This gives you a better runner grip and more chance of a full cut.



# 3 CLEAN UP UNEVEN EDGES

Even with careful glass scoring, some pieces break unevenly, leaving sharp "needles" along their edges. This prevents you from being able to align pieces tightly.

So, after running, check every piece and trim needles with groziers, pad, or grinder.

# CUTTING SMALL CIRCLES (1-5" / 2-12 CM)

#### BY RUNNING ARCS

**Trace & Score:** Trace the circle on a piece slightly larger than the final size (this eases trimming and reduces waste).

**Run the Arcs:** Score the circle using a series of intersecting arcs, all in the same direction.

**Small Circles:** Use breaker groziers to remove the arcs.

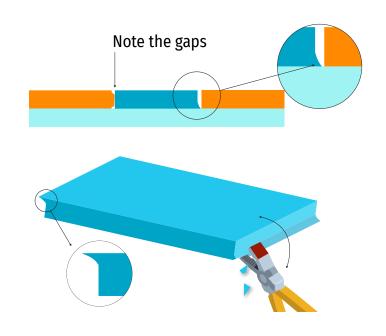
**Large Circles:** Use running pliers to remove sections around the circle.

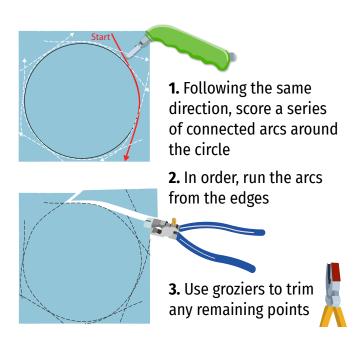
**Finish the Edge:** Trim with groziers (using its serrated jaws) or smooth with a grinder.

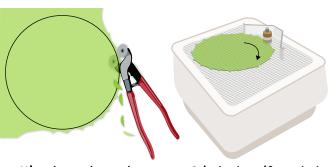
#### **BY NIPPING**

**Trace and Cut with Nippers:** Use mosaic nippers to nip along the line in one direction. (Pieces will alternate between large and small depending on the position in the circle.)

**Finish the Edge:** Trim with groziers (using its serrated jaws) or smooth with a grinder.







**1.** Nip glass along the line. You may need a second pass.

**2.** Grind edges if needed.

# 5 CONCAVE CUTS

#### **BY GROZIERS**

**Score Arcs:** Cutting curves in glass can be challenging; but with practice, you can cut and shape pieces with sizable inside curves (concave shapes).

Depending on the depth of the concave, score as many small arcs 2-3mm (1/8") as needed.

More scores increase the chances of achieving a reliable cut. Alternating scoring from the left and right can also help distribute stress in the glass.

**Remove Arcs:** With its square prong on top, use the groziers to pinch and hold the glass.

Pull the groziers away from your other hand to cause the arc to break free.

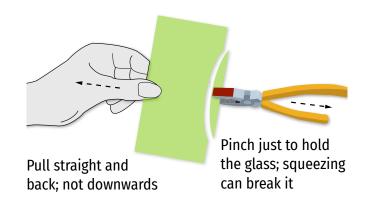
If it doesn't break, try again or move the groziers to a different point on the arc.

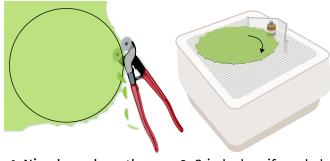
Don't squeeze the glass with the groziers, as this will cause it to break.

#### BY GROZIERS AND GRINDER

Score Arcs, Use Groziers Part Way: While this takes longer, a more reliable method is to score and remove the first one or two arcs by groziers.

Then, finish removing and smoothing the tighter inside arc(s) by grinder.





**1.** Nip glass along the line.You may need a second pass.

2. Grind edges if needed.

# FUR / SCALLOP EDGE EFFECT

We frequently use this technique in ornament making. By nipping bits of glass along the edges, we can create gentle scallops or curves that mimic a "furry" edge.

This technique is great for various animals, caps, and scarves. We also incorporate it into many of our contour fused projects to create flowers, leaves, and other varied-shaped pieces.



An easy way to make quick and identicallyshaped copies of pieces is to use nippers.

Place the cut shape on top of the new glass and use the raised edge of the shape to precisely guide the nippers around.

Then, perform minimal trimming or grinding to complete the copy.

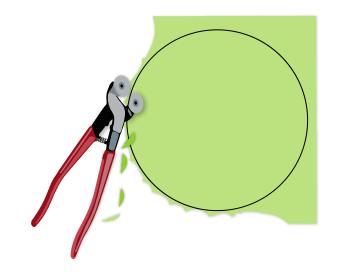
# 8 WATCH THE POINTS

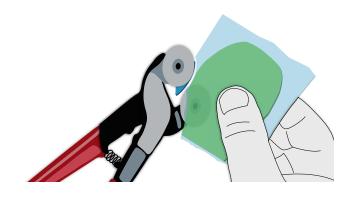
The 6mm rule is always present, even with contour fused projects like ornaments.

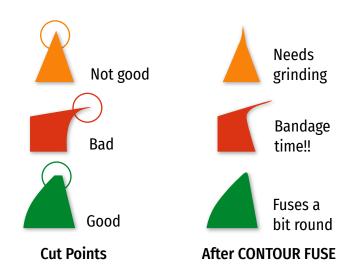
The moment the glass starts to soften (1250 °F / 677 °C) it will also start to behave like a liquid and attempt to reach 6mm.

So points of glass cut for leaves and petals will always sharpen during contour fusing (1375 °F / 746 °C).

(During Christmas time, we order bandages in bulk!)







# TIPS 3: FIRING SCHEDULES

DOT FUSE °F				
STEP	RAMP	TEM	Р	HOLD
1	400	150	0	15-30 <sup>1</sup> min
2	9999	900	950	15 <sup>2</sup> min

	DOT FUSE °C				
STEP	RAMP	TEMP		HOLD	
1	204	815		15-30 <sup>1</sup> min	
2	9999	482	510	15 <sup>2</sup> min	

- 1. 15 minutes for pieces smaller than 1/2" / 1 cm, larger pieces need more time.
- 2. I've included this minimum anneal, but I find it's typically not necessary at all.

<b>TACK FUSE °F</b> (2 FULL LAYERS - 6MM)			
STEP	RAMP	TEMP	HOLD
1	300	1350-1400	5-10 min
2	9999	900   950	60 min

	TACK FUSE °C (2 FULL LAYERS - 6MM)			
STEP	RAMP	TEMP		HOLD
1	149	732-760		5-10 min
2	9999	482	510	60 min

CONTOUR FUSE °F (ORNAMENTS)			
STEP	RAMP	TEMP	HOLD
1	300	1200	301 min
2	400	1375	6-9 <sup>2</sup> min
3	9999	900   950	60³ min

CONTOUR FUSE ° F (ORNAMENTS)			
STEP	RAMP	TEMP	HOLD
1	148	732	5 min
2	204	746	6-9 <sup>2</sup> min
3	9999	482   510	60 <sup>3</sup> min

- 1. 15 minutes for pieces smaller than 1/2" / 1 cm, larger pieces need more time.
- 2. Ornaments (given their size) heat quickly, so we have different hold times for each of our kilns. Adjust as needed.
- 3. Normally small projects don't need 1 hour anneals. But ornaments can be 3-4 layers thick.

<b>SLUMP ° F</b> (CURVES)			
STEP	RAMP	TEMP	HOLD
1	300	1180¹	5 MIN
3	9999	900   950	60 MIN

SLUMP °C (CURVES)			
STEP	RAMP	TEMP	HOLD
1	149	538 <sup>1</sup>	5 min
3	9999	482   510	60 min

#### WHY DOES KILN WASH STICK TO GLASS?

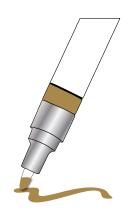
Each glass colour has various metal oxides to produce their colour. Opaque glass contains more of these, changing the way it melts. This causes it to often pick up kiln wash or paper when it flows.

# TIPS 4: FINISHING THE TEA LIGHTS

# PAINT MARKER FOR AFTER FIRING

I recently discovered—Overseas® Oil-Based Paint Markers. In many colours they are nontoxic, and adhere really well to glass.

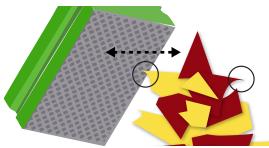
I use these for eyes or dots on ornaments **after firing**—often easier than glass paint.



# SHARP EDGES AND LEVELING

**Sharps:** The trees often have sharp points. Use a 60-grit sanding block to remove the sharp edges. Check also for bits of sharp frit that may have fused to edges.

**Level Tree Bottom:** Grind any glass hanging over the bottom so the piece will sit flat.

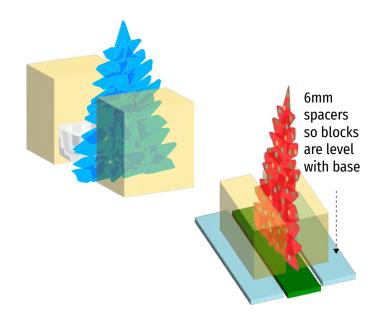


Sand from the **back** of the ornament at a 45° angle to avoid having the pad touch and scratch the front.

# 2 ASSEMBLING THE PIECES

**Two-Part Epoxy:** At right, is how we set pieces for gluing with epoxy. Use something to prop the and level pieces while the epoxy cures (10-15 min). (Don't use too much; it can drip and bond glue to the table.)

**UV Glue:** Although it costs more, UV glue is very fast and strong. Place 2-3 dots of UV glue on tree and quickly line up with the votive. Shine UV light through votive for about 1 minute. (This glue is very runny but not a lot is needed.)



# TALL SNOW FAMILY



### **MEET THE FROSTS!**

Table-top snow people like these make great perennial Christmas décor. This fella has been on display in our studio for eight seasons! This year we added his family. **Facial Expressions:** I search "happy cartoon face" for expression ideas.

See Appendix 1 templates, pages 37-40.

### **DETAILS**

**Easy to Cut:** All parts are all hand-cuttable. The scarf and cap trim hold everything together.

**Fuse a Base:** As the snow couple are tall and only 3mm thick at the footing, I glued a tea light to each.

Without the tea light, you'd need to add 2–3 extra layers of glass at the bottom.



# CHRISTMAS LIGHT CATCHERS

### S AND C CURVED CATCHERS

It's surprising how making larger pieces (around 8" / 18 cm tall) takes only a little more effort than smaller ornaments—the details are nearly the same. Next time, go big!

### **DETAILS**

**Slump Molds:** I use lamp bender and single or double curve molds for shaping. Use the SLUMP FOR TRAYS schedule. Easy, peasy!

**Iridescent Frit:** On the third and forth catchers, I use coarse irid frit; it catches light and sparkles really well on larger pieces.

**Endless Options:** Designs can be as simple or intricate as you like. These make great gifts—quick to create but impressive in size.

**Light Catcher Shape:** Trim the rectangular base differently each time to suit your layout.

**Wide Bottom: & Balance:** See page 23 note about the importance of a broader base for stability. Also, avoid top-heavy designs to prevent the piece from being tippy.

**Bottom Finishing:** After contour fusing, the bottom is often uneven. Its good to grind this flat before slumping.











# **TEA LIGHT TREES**



### **METHOD OF DISPLAY**

At studio, we make 3 additional variations on the traditional Christmas tree tea light (shown right).

Depending on the display you have chosen, please note these required adjustments:

- 1. Tea Light: no change.
- **2. Standing Tree:** Add a partial layer of "branches" to widen base. Fire 6mm base on FULL FUSE.
- **3. Tea Light Scene:** Build tree directly onto the back ground base. Remember to check how transparent colours will overlay to avoid muted or dark areas.
- **4. Center Votive:** Build the two pieces separately while keeping in mind how the transparent colours will appear overlayed.



**1. Tea Light:** Votive glued to back of tree.



**2. Sanding Tree:** Tree on pre-fused base.



**3. Tea Light Scene:** Tree and background built and fused as one. (No triangle base.)



**4. Center Votive:** Votive glued between background and tree pieces.

# **EXAMPLES**



**Mini Trees on Bases** 



**Double: Tree and Snow** 



**Double: Tree and Sky** 



Double Tea Light: Clear Tree



**Mosaic Style** 



**Two Colours** 



**Clear Dots for Bling** 



**Geometric Shapes** 



**Geometric Trio** 

# THE FLUFFY TREE

### **PLANNING**

### **BACKGROUND**

Corners: Rounding corners refines the look.

**Decorate, sprinkle snow** using coarse or medium frit; not fine for the snow.

**CONTOUR FUSE:** Same as the tree.

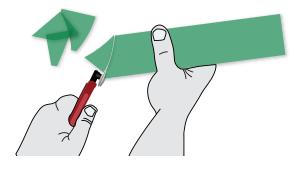
### **BASE**

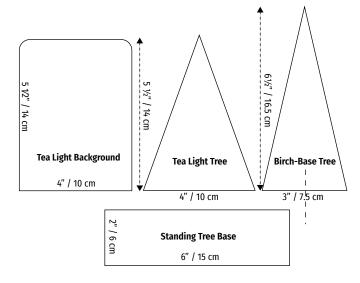
**Sizing:** Cut clear and colour base parts to be 1" / 2.5 cm larger on all sides of the tree.

If the tree is 4.5" / 11cm long, the base should be at least 6.5" / 16.5 cm long and 2" / 5cm wide.

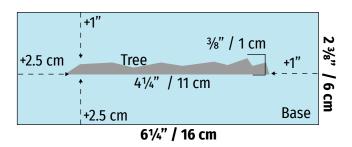
#### **FULL FUSE**

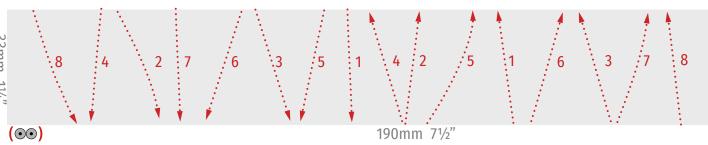
### **CUTTING**





Cutting templates Appendix 2, 3, pages 41,42.





# **ASSEMBLY**



**Using only mosaic nippers** makes it easier to adjust sizes, angles, and trim points as you go. **4 or 5-sided polygons** with pointed ends work best. *See page 20*.

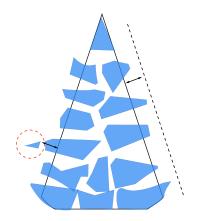


**Apply thin lines** of glue along all edges. **Trim** bottom corners for a rounder design (optional).

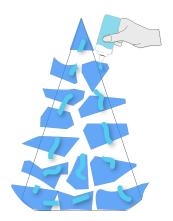




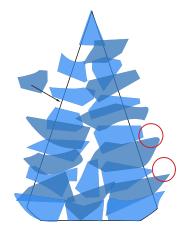
**Space pieces** about 6mm (1/4") between each other with points over the edges. **Maintain** equal spaces between the pieces.



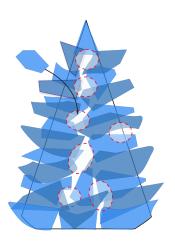
**Limit** hang over to less than 6mm (1/4"). **Trim sharp points**: Sharp now come out much sharper after fusing!



**Apply** small dots of glue on layer 1.



**Place second layer** pieces covering gaps between first row pieces.



**Check for gaps:** Cover remaining gaps.

# **DESIGN VARIATIONS**

### 1. THREE COLOUR TREE (GRADIENT)





**1.** Glue three points of each colour up both sides.



2. Glue next layer with each colour overlapping the next. This creates a blend of the three, instead of

three distinct sections.

### 2. CLEAR TREES



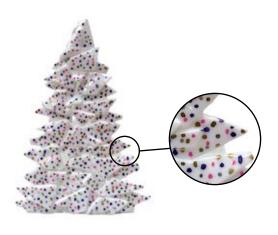


**Photos** don't do justice to clear glass, but we all know it will sparkle.

Make a tree with some of your scrap glass, add some white frit and fire.

Place the candle and, Voilà!

### 3. GLASS MARKER PAINT



### **Paint for After Firing**

I discovered this paint last year—Overseas® Oil-Based Paint Markers (see page 15).

They come in 10 colours and are odorless, non-toxic, and adhere beautifully to glass.

I use this to add eyes or dots to ornaments after firing—often much easier than glass paint, which can sometimes apply too thin or runny.

# **TALL TREES**

# GO BIG!

Tall trees, especially the fluffy tree style, make great centerpieces.

**Plan for the Base:** The only point of advice I have is to consider the size of the final tree and ensure you have a base wide enough to allow for good epoxy bonding to a 6mm base.

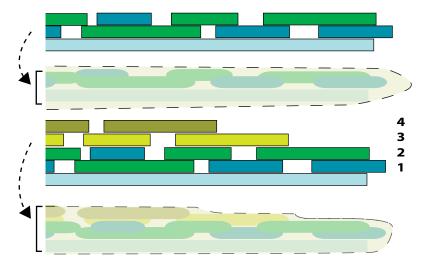
For any trees over 5-6" / 7.5-9 cm, I add some "branch" pieces in the center to create a wider bottom. For trees taller than 9-10" / 22-25 cm, I add a fourth layer.

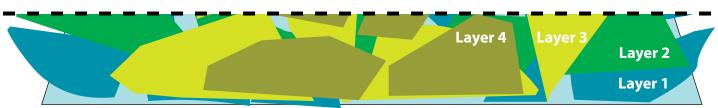
See Appendix 4, page 43 for tree sizing.



- **1. Using two colour layers** on clear CONTOUR FUSE to under 9 mm. That's fine for a tea light, but too narrow to glue to a 6 mm base.
- **2. Layers 3 and 4** provide enough glass for a 14–17 mm CONTOUR FUSE—ideal for gluing.

**Note:** These layers don't need to cover the whole piece. Placing them only in the center helps create a curved tree profile.





# **NOVELTY TEA LIGHTS**

#### 1. GINGERBREAD HOUSE



### 2. STAINED GLASS STYLE



### 3. SANTA IN CHIMNEY



**House Colour:** In this example, I use dark amber—sort of brown, but transparent.

**Base vs. Tealight:** If attaching to a base, add small bits of a third "snow" layer at the bottom to widen the footprint and ensure a secure bond.

**Build your mosaic:** Focus on filling around the feature, then right at the edges, then the rest.

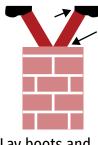
Let it Dry Fully: Pieces not firmly glued will lift.

**Fine Black Frit:** Sprinkle layer of frit—no glue. Bits will be left on some pieces, this adds to the charm.

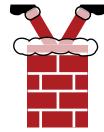
**Hold brush horizontally:** gently sweeping frit from the center outward and off the edges. **Avoid vertical strokes:**This will lift frit out of the seams.



**1.** Glue the brick design with 1mm stringers



**2.** Lay boots and legs next to the chimney. Trim to ensure pieces touch.



**3.** Glue cuffs and chimney snow. Make sure glue dry before moving.

Cutting template, Appendix 5, page 44.

### 4. SNOW GLOBE





I don't know who came up with the cuddling snow people but its so cute as a tealight!

**Cut a 5" / 12.5 cm circle** and trim a small section off the bottom to level it.

**Fit the flat base** piece there, then cover with the top base and fuse together. I often use Bullseye® Steel Blue—it fires to a metallic silver after a contour fuse.

#### 5 RAW FNGF (RIIII SEVE)



**Bullseye Glass™ Edges:** As you know, Bullseye® sheets have rolled, uneven edges that we sometimes don't know how to use—but they're perfect for these trees.

**Edge Strips:** I usually cut the edges into 2" / 5 cm strips. This allows flexibility when aligning the natural curves and adjusting the width of the strips.

**For gluing**, I use Aleene's® glue. It holds well when pieces overlap or are slightly raised. Let the glue dry fully before moving your work.

### 6. SNOOPY





**1.** Glue pieces as next to each other as shown. His arm is over roof.



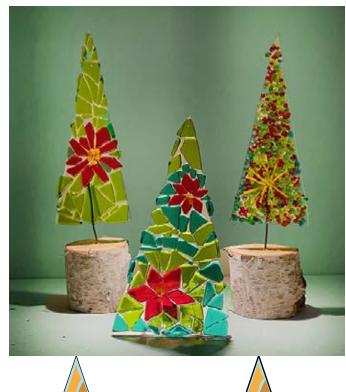
**2.** Add black ear, collar. Use stringer or paint to finish.

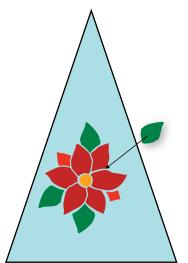
Cutting template Appendix 6, page 45.

### 7. MOSAIC PATTERNS

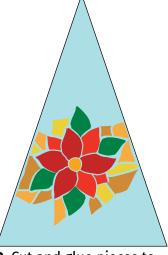
If you have the patience, mosaic patterns are incredibly rewarding. Once contour fired, the many rounded glass mosaic edges catch and bounce the light.

A Rule of Thumb: Feature first, edges then fill.





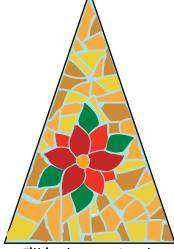
**1.** Start with the focal feature. Always build outward. Glue.



**2.** Cut and glue pieces to fill the gaps around the feature.



**3.** Edge is next. It creates the visual border.



**4.** Fill in the rest. Let dry before moving.

### 8. BIRCH TREES







**Cardinal with Snow** 



**Cardinal with Snow** 

#### **ASSEMBLY**

**Base:** Use a transparent for the background and opaque white for the snow. For fixing to a 6mm base, add second layers of snow for the bottom to be wide enough for gluing.

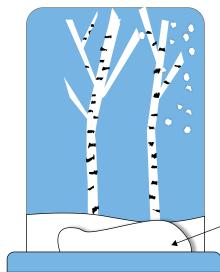
**Spread Glue:** Apply a thin layer of glue over the entire base for easier assembly.

**Trees:** Hand cut 5-6" / 12-15 cm strips of translucent or opaque strips. Irregular is best.

**Snow:** Sprinkle coarse or medium frit. (Don't use fine frit, it comes out over melted.)

**Wait** for all to dry before adding black paint.

**Black Paint:** A toothpick dipped in paint and applied sideways makes birch-like spots. Or, once fired, use an Overseas® marker (page 15).



- 1. Spread glue all over
- 2. Place branches
- 3. Sprinkle frit
- 4. Add paint last

**Note:** If attaching to a 6mm base and not a tea light, put 3rd layer pieces

### 9. ANGELS





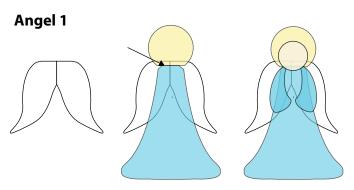
### **ASSEMBLY**

Smooth Edges: Given this is a design based on curves, its important to grind all edges really well (or be a very practiced cutter.)

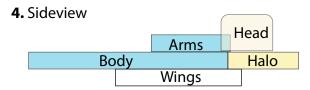
**Check Colour Combinations:** Given much of the design involves overlapping glass,

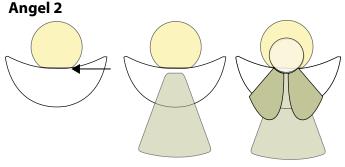
I recommended using colours and tints that have the same intensity. A dark with a light will not work.

Hold colour samples in the light to determine the fused combination(s) that you would prefer best.



- together as shown.
- **1.** Place wings **2.** Trim halo; glue it and body on top of the wings.
- 3. Glue head dot; place arms as shown.





- 1. Trim halo so it is flush to the wings.
- **2.** Glue body over wing, with a small space on top.
- 3. Glue large dot for head, arms.

4. Sideview

	Arms	
Body		Head
	Wings	Halo

Cutting templates, Appendix 7, pages 46, 47.

# **GNOMES**



# THE OPTIONS ARE ENDLESS!



# **GNOMES & GNOMETTES**

Of all of our Christmas ornament and tea light workshop options, students make gnomes the most.

I think this is because we can imagine making a little person or personality, and the ways to customize them are endless.

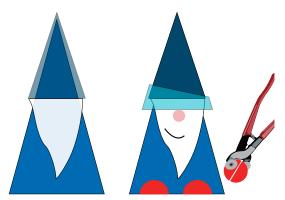
### **DETAILS**

**Sizing:** We make standing gnomes in three sizes (see photo at right); details in Appendix 5,6 pages 48, 49.

**Tea Light or Base:** A single UV-glued tea light will hold most gnomes upright.

For bases, FULL FUSE them in a separate firing.

**Dots & Noses:** Make large dots and noses in advance in several opaque colours for variety. Since they don't always break cleanly with nippers, prepare a few extras.

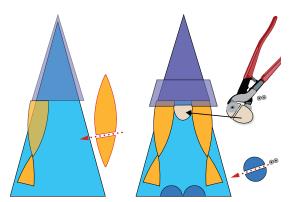


**1.** Cut top traingle to get hat and brim. Place hat so it overlaps the body. Cut beard. Place next to hat. Glue.

**2.** Place brim, overlapping the hat and bear. Use nippers to chop feet. Add nose. Glue.







Cut top traingle to get hat and brim.
 Place hat so it overlaps the body.
 Cut hair pieces on an angle. Glue all as above.

- **2.** Place brim, overlapping the hat and hair. Use nippers to chop nose and dots for feet.
- 3. Sideview shows how the pieces overlap.



### **DECORATING THE GNOMES**

#### **ACCESSORY GLASS**

The easiest and most popular method is to grab all your accessory glass and play.

See what dots, stringers, frit and other bits and bobs of glass might work on your gnome of the moment.



#### **PAINT**

I find glass paint is great for gnomes. The trick is to make sure the paint is thick and well mixed:

- Mix Really Well: Note the glass in the paint settles at the bottom and hardens after a few months. Not thoroughly mixed, this paint can run and fire pale.
- Practice: on scrap glass—avoid the frustration of wiping and repainting.
- Consider Painting First: Decorating the hat before its glued onto the body, reduces poor outcomes.



### **MORE THAN A GNOME**

This little gnome with a Christmas tree hat is my fave. Putting a Christmas tree on his head just seemed so right.

Since then, I've broken out of the "just decorate the hat" mold and looked for other ideas

The second gnome with branches and berries is my latests.





# **CHRISTMAS SCENES**

### **CHRISTMAS SCENES**

Setting up Christmas scenes in our homes has been a long tradition. A few years ago I set up scenes at our Gift Shop too. These really show off the variety of our pieces (and sales!).











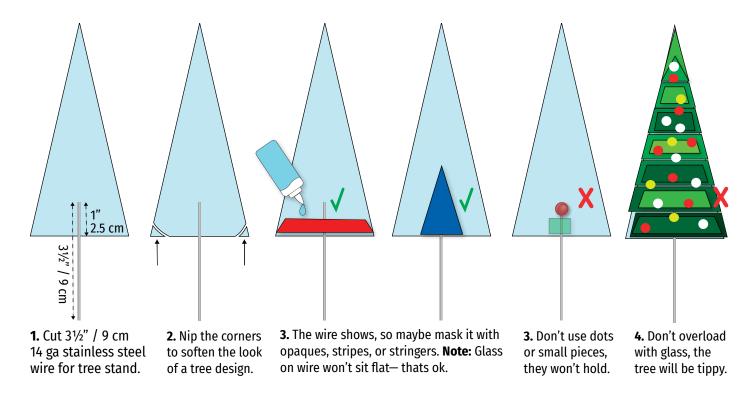
# **BIRCH BASE TREES**



# **IDEAS**

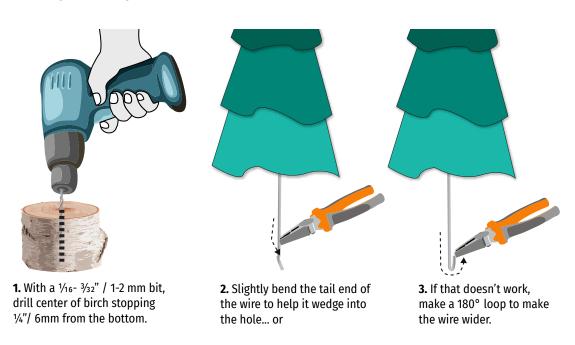


### **ASSEMBLY**



Cutting template Appendix 3, Page 42.

### **DRILLING THE BASE**



# **BIRDS**

# **CARDINAL ON BIRCH**

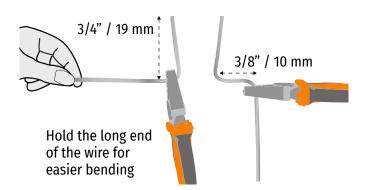
At our studio, we have trouble keeping these cardinals in stock! They take some detailing but are worth it.

### **DETAILS**

**Smooth Edges:** Given this is a design based on curves, (and that its based on a real creature) its important to grind all edges really well (or be a very practiced cutter.)

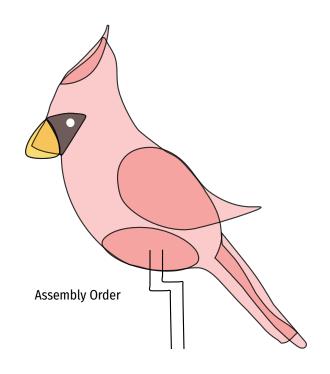
**Wire:** Use thicker stainless steel wire, 14ga, for the bird's legs.

**Shaping the Wire:** Additional instructions on cutting and shaping the wire are on the template, Appendix 8, page 50.)





Remember, you can flip the design to have birds facing the other way...



Cutting template Appendix 8, page 50.

# **BIRD ON A WIRE**

At our studio, we have trouble keeping these cardinals in stock! They take some detailing but are worth it.

### **DETAILS**

**Smooth Edges:** Given this is a design based on curves, (and that its based on a real creature) its important to grind all edges really well (or be a very practiced cutter.)

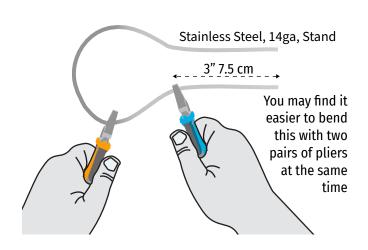
**Wires:** Use 14ga stainless steel wire for the stand.

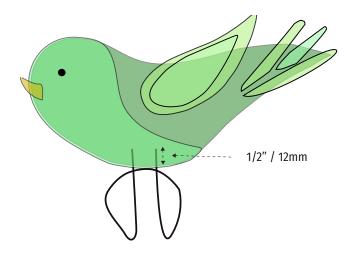
**Shaping the Wire:** Additional instructions on cutting and shaping the wire are on page X.



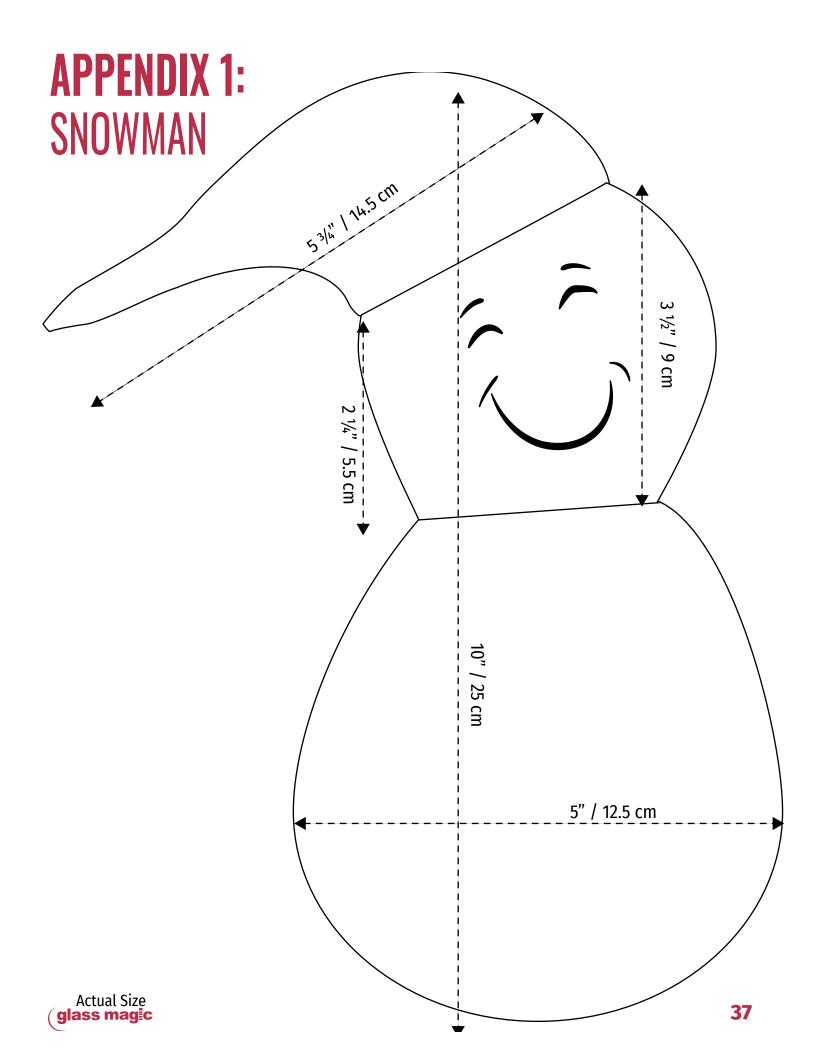


Remember, you can flip the design to have birds facing the other way...

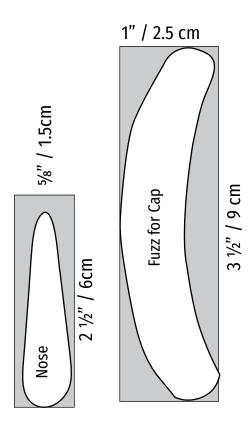


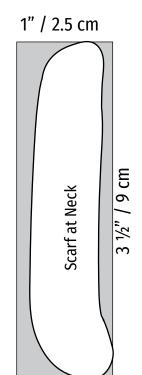


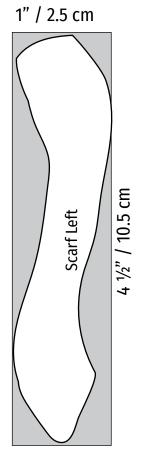
Cutting template on page x.

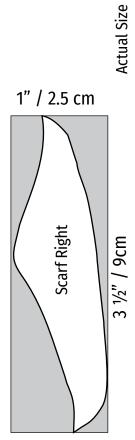


#### **SNOWMAN HAT, SCARF**

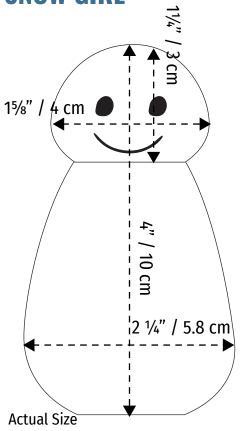


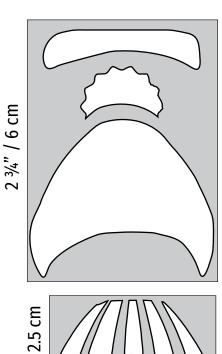


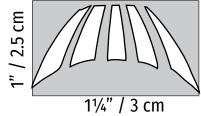




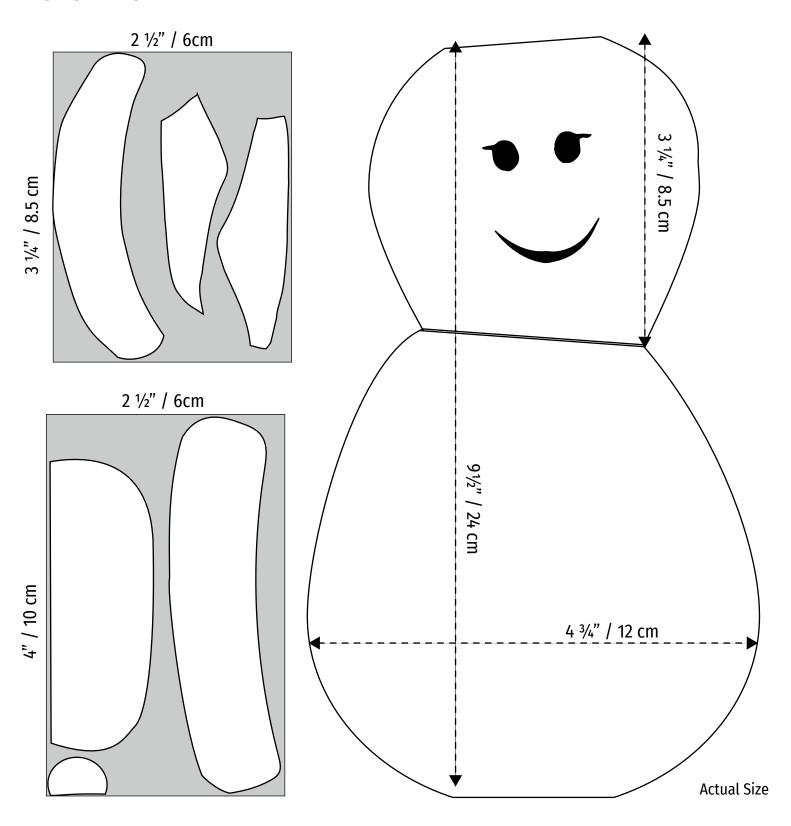
#### **SNOW GIRL**



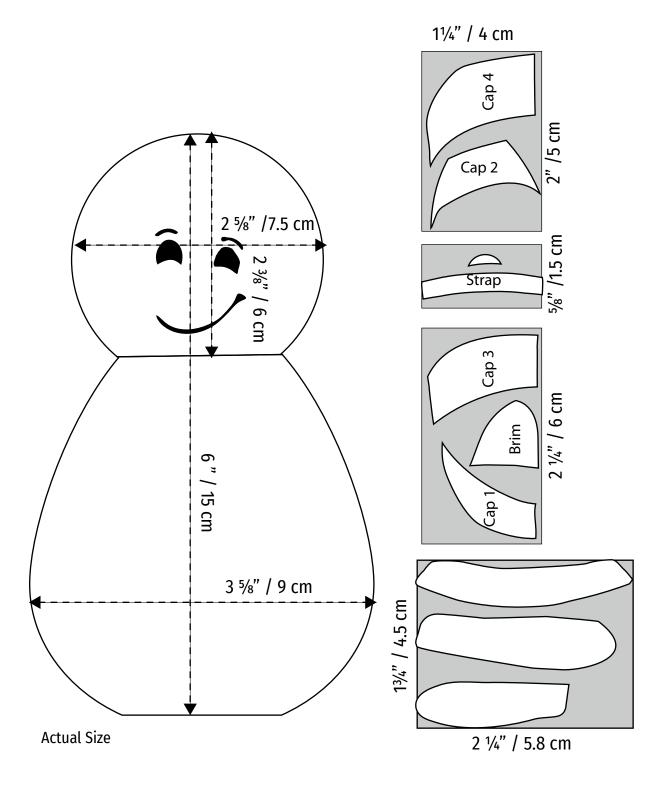




#### **SNOW WOMAN**



#### **SNOW BOY**



# **APPENDIX 2:** BACKGROUND, 6MM BASE

Round the edges

5 ½" / 14 cm

**Tea Light Background** 

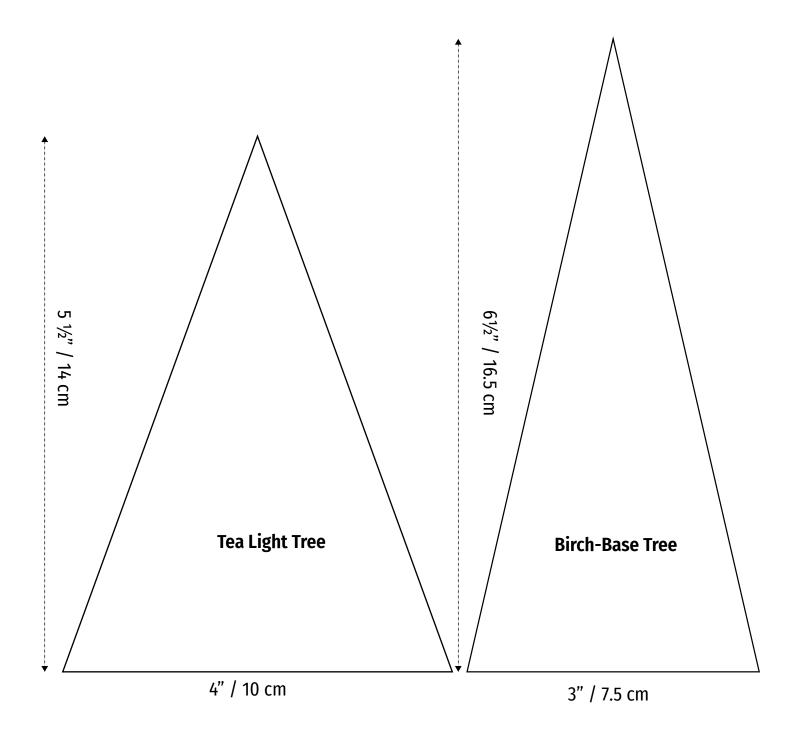
4" / 10 cm

ö" / 15 cm

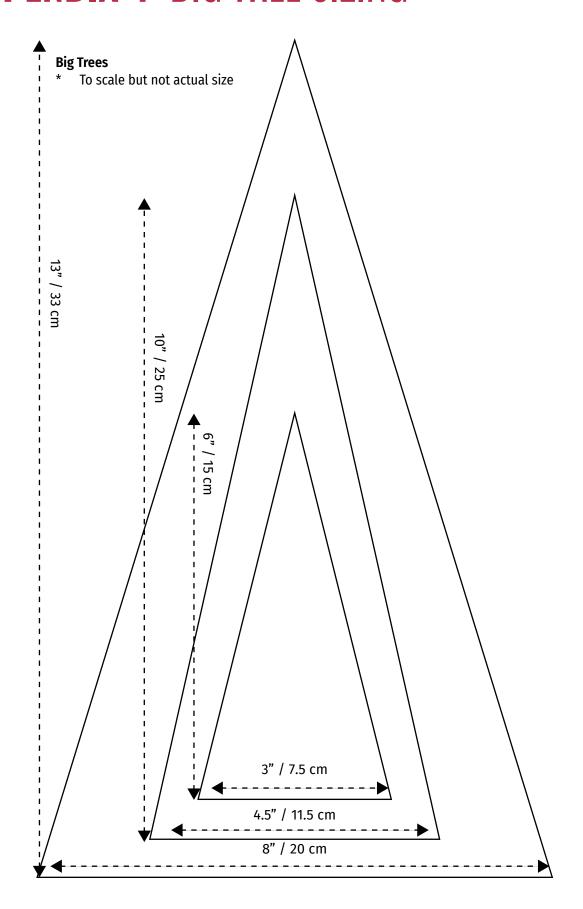
**Standing Tree Base** 

2 3/8" / 6 cm

# **APPENDIX 3:** TEA LIGHT, BIRCH BASE TREES

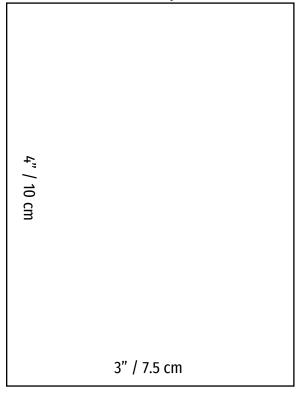


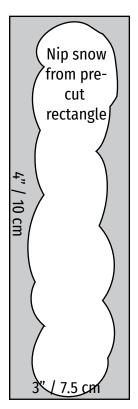
### **APPENDIX 4: BIG TREE SIZING**

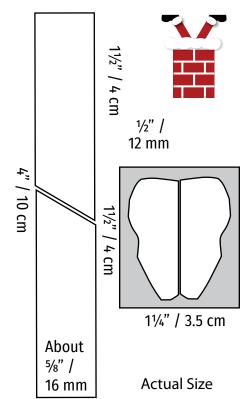


### **APPENDIX 5:** SANTA CHIMNEY

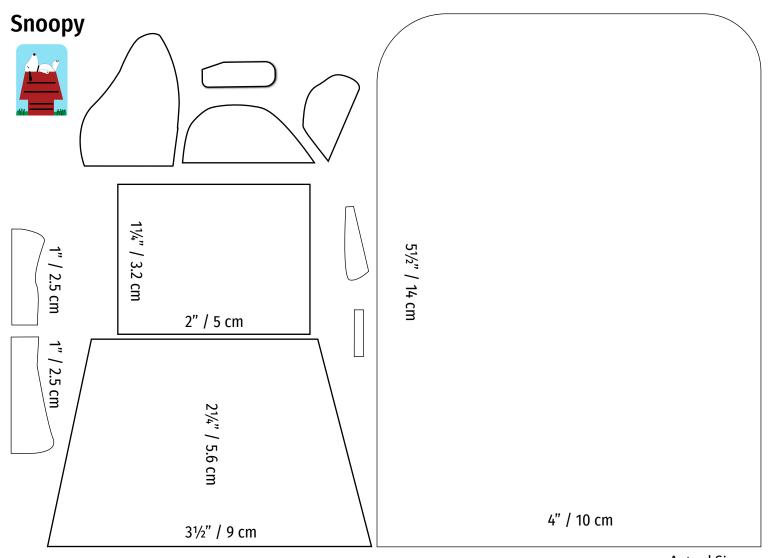
Santa in Chimney





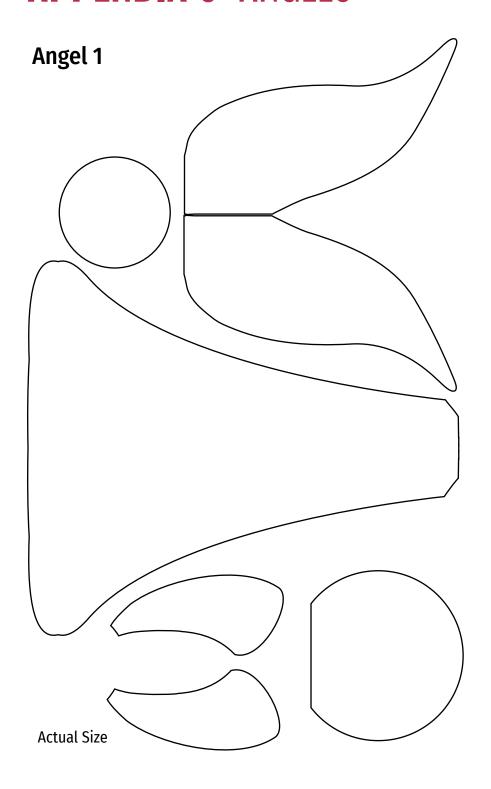


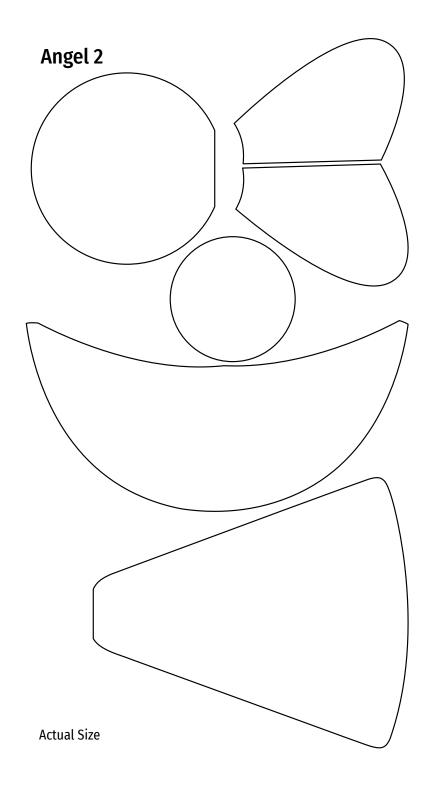
## **APPENDIX 6:** SNOOPY



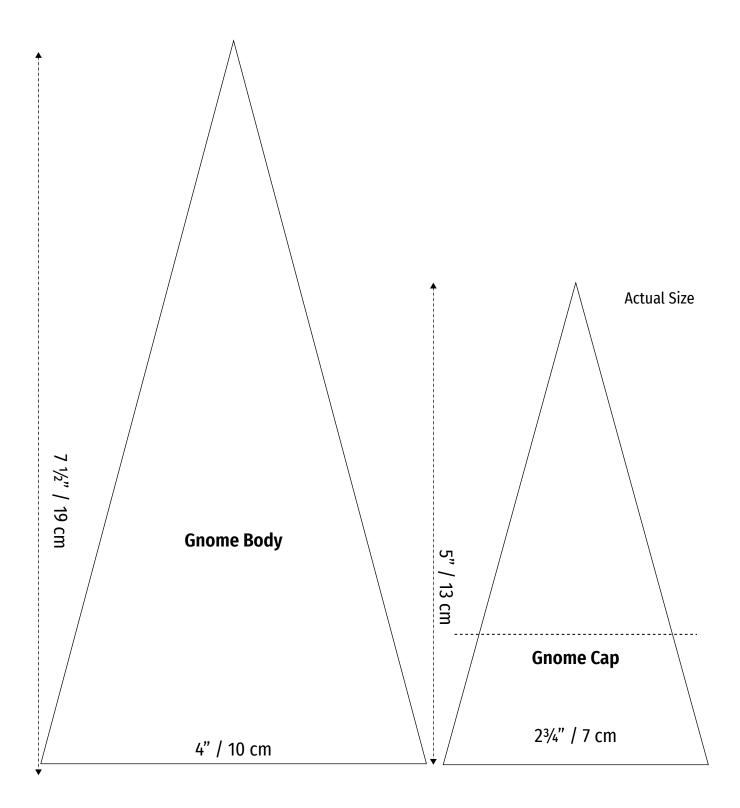
**Actual Size** 

## **APPENDIX 6:** ANGELS

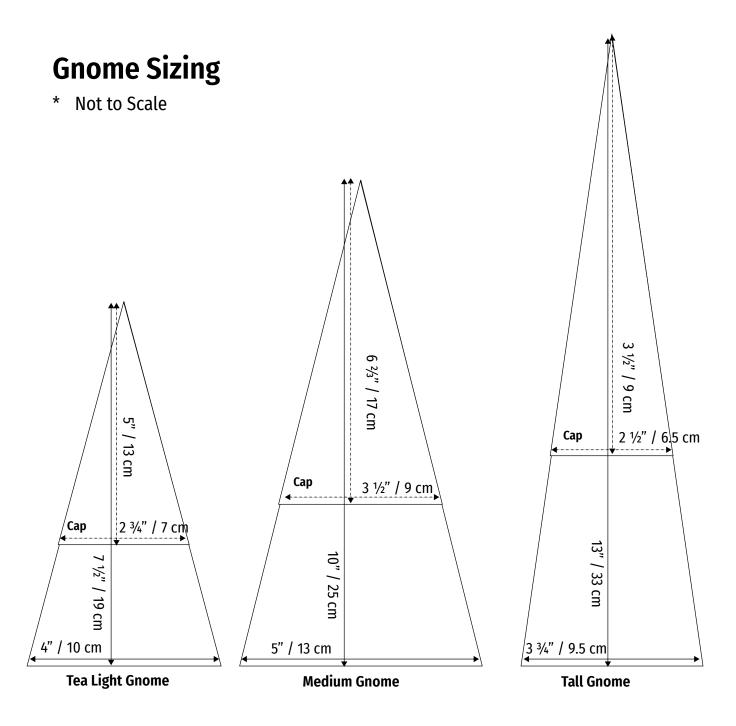




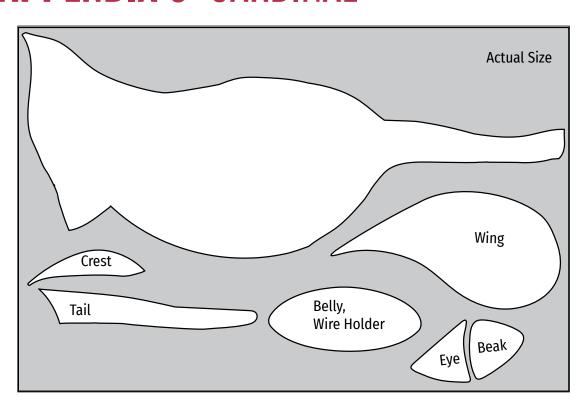
## **APPENDIX 5:** GNOME

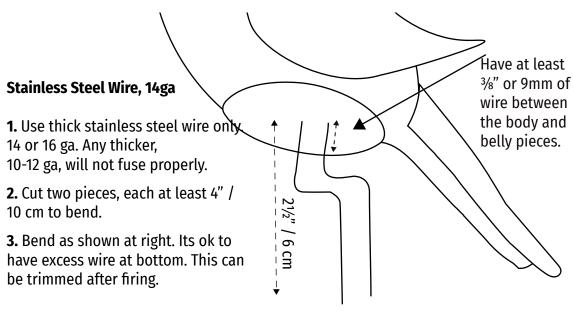


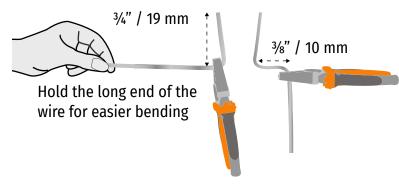
### **APPENDIX 6: GNOME SIZING**



#### **APPENDIX 8: CARDINAL**







### **APPENDIX 9: WIRE BIRD**

