



M. J. G. 2002

Welcome to the first edition of the Glass Art Society Passport!

As we spend the majority of 2020 at home, we hope the Passport project will be a fun way to remind us that despite the need to distance ourselves from each other, we are indeed connected, through the wonderful material glass.

This unique Passport allows you to take a journey around the world, from the South West of the USA to Europe, the Eastern Mediterranean and all the way to Australia, to interactively explore ideas and techniques in glassmaking with activities that don't even need glass! What better way to learn about art than to create your own masterpiece and visit studios at the same time. We hope you enjoy the Passport as much as we did making it.

After you finish an activity, give yourself a stamp to mark it complete, and if you want to post your artwork on social media, please give us a shout-out with the following tags:
#gaspasport #glassconnections #glassartsociety #glasspassport

We would like to thank the following artists and institutions for jumping on board with this project: Barbara Heisler, CEO of GlassRoots in New Jersey, Fredrich Rombach, Director of Fredrik Rombach Glass in Hoboken, Dafna Kaufman in Jaffa, Mary Kendell, Education and Community Engagement Manager at the Canberra Glassworks, Australia, Debra Ruzinsky, Director of the Bainbridge Art Center, Karina Oumov, Youth & Outreach Coordinator at Urban Glass, New York, Carlyn Ray, owner of Carlyn Ray Designs and Dallas Glass Art, and Nadania Idriss from Berlin Glas in Germany. A special thank you goes to artist Mathieu Grodet in Toronto, Canada for his brilliant cover illustration.

With love from the Glass Art Society



GAS

GLASS ART
SOCIETY

AUSTRALIA

G'day mate, welcome to Canberra, Australia!

Canberra is the capital of Australia and the Ngunnawal people are the original custodians of this land. The city is now home to almost 400,000 people, the largest inland city in Australia, and it is fortunate both in position and beauty – housing award-winning cultural institutions, stunning architecture, vibrant culture, open blue skies and surrounded by delightful, untouched natural reserves and awe-inspiring bushlands.

Canberra Glassworks is Australia's national centre for artists who work with glass, a core cultural asset at the heart of the Kingston Arts Precinct, and a place where we embrace experimentation, education, collaboration and engagement.

This activity is based on the glass working technique known as Stained Windows, where small sections of coloured or stained glass are arranged together to create vibrant and decorative patterns or pictures, and are held together (traditionally) by strips of lead and supported by a rigid frame. Because we all don't have access to glass - or lead for that matter - at home, we came up with an alternative way to create a beautiful stained window project without using glass.

MATERIAL LIST

- Coloured cellophane paper or tissue paper
- Contact paper
- A4 black paper or card
- Scissors
- Marker, pencil, ruler.

PREPARE

- Roll out your sheet of contact, and mark out two pieces slightly larger than your piece of paper. Cut out the two pieces of contact.

HINT: You want enough extra contact around the edges that they can seal the paper inside. The reference squares on the contact will help you.

- To make the frame for your window, fold your paper or card in half. Use the ruler to measure about 3cm in from each edge (this is usually the width of your ruler!) to make a rectangle from the folded edge of the paper.

- Cut the inside rectangle out using scissors. Unfold the black paper to discover the frame.

HINT: you could also try folding the black paper several times then carefully cut out small shapes like triangles, squares, or circles. When you unfold the paper, you will have your own unique pattern with different holes to fill with coloured light

- Cut out shapes from your coloured cellophane or tissue paper. You might like to lay out the cellophane and draw shapes on it with a marker, or you might like to just cut different shapes and see what you come up with.

CREATE:

- Peel away the contact from its backing paper. You might need to find a friend to help you with this.
- Stick down the black frame. Now you have a sticky surface to begin your stained-glass window.
- Place your cellophane or paper onto the sticky surface within the black frame. Decorate as you like. You might like to develop a pattern or just place pieces all around.
- Consider how your piece will look when held up to the light. Will you cover the whole surface or leave spaces? Will you use a warm or cool colour palette?
- Peel your second piece of contact away from its backing paper. Carefully stick the contact on top of your window, working from one side to the other and squishing out any bubbles as you go.
- Press all over so the contact is stuck down.
- Cut the excess contact off from the edges. HINT: leave a 5mm trim around the edge so the contact seals around the frame.
- Hold your artwork up to the light. Admire how the light illuminates the colours. Just like glass, cellophane glows and looks beautiful when held up to the light. Hang your artwork in the window and watch it change throughout the day.



canberra
glassworks

BELGIUM

Welcome to Hoboken, Antwerp! Our glass studio is in Belgium, Antwerp and more specifically Hoboken.

Did you know that many of the early American settlers were refugees from Antwerpen and the Southern Netherlands?

The first settlers in New York were Belgians (Flemish Dutch and Walloons), they came to New York in 1623.

Hoboken has a proud history of being one of the largest shipbuilding yards, and still now we see parts of that in the district. As well, Antwerp harbor is also one of the largest in Europe!

But now onto the fun stuff, glass!

Our glass studio works with waste glass, making glasses, vases and products out of molten glass as well as flat glass works for companies and houses. We host workshops for young and old, and we do events and demonstrations on a regular basis. We also run a foundation that works with young immigrants. We teach them to work with glass and help them learn the native language at the same time.

We really hope you make an awesome design so we can add it to our wall of fame!

So, the game is on!

Make a drawing using red, yellow and blue !

Make it on 1 A4 page !

Send it to us through instagram or email;

@Frederik_Rombach o info@rombachs.com

We will then choose 3 designs

We will make them !

And hang them on our mozaïek wall !

You as a winner will receive an signed photo of the result ! So, make it special and have fun with it!

We are looking forward to seeing your work !

Any questions ?

Email us at info@rombachs.com

Good Luck !



GERMANY

Welcome to Berlin!

Kiez Mobil at Berlin Glas: Berlin is the capital and also the largest city in the country. It is located in the east very close to both Poland and the Czech Republic's border. There are many famous historical buildings and monuments here, including traces of the Berlin Wall that once divided the city into East and West. Since the 1990's Berlin has become very international with a thriving art scene. From graffiti to glass, there isn't much missing when it comes to art in Berlin!

This activity is based on glass fusing, the ancient technique that involves decorating a glass plate with layers of small cut, coloured glass. The panels are then fired in a kiln at 785 degrees Celsius. Berlin Glas has been rolling a small cart around called the Kiez Mobil that is filled with glass fusing supplies. They hold workshops in youth clubs and schools, teaching kids this really cool technique of working with glass.

We may not have glass at home to cut up and fuse, but we can use a piece of clear plastic to make something similar. Here's how:

What you will need:

- Plastic bottle, pieces of plastic (clear and coloured)
- Transparent paper
- Scissors
- Transparent glue
- Pencil and paper



What to do: Cut the transparent plastic to a desired size. We usually work with 15x15cm squares. Place the transparent square on your paper and with the pencil outline it. Put the plastic panel to the side and draw a picture in the square you drew. When you have finished, place the clear panel on-top of the picture and cut the coloured plastic into the different shapes needed to render your drawing, using transparent glue to secure it to the base panel.

When you finish and the glue is dry, hold your panel up to the light. Do you see how it glows?



Fun fact: "Kiez" is a very term for neighbourhood. Say "kiez" in Munich and they might look at you in a funny way!



Israel

Welcome to the hometown of artist Dafna Kaffeman, who lives and works in Jaffa, a beautiful port village near Tel Aviv in Israel. Dafna uses a technique called flame-working to create realistic plants and insects that are inspired by the local environment wherever she goes. She incorporates them into her art installations by sewing them onto a piece of fabric that include texts or poems. So realistic are the objects that she makes, it takes a moment to remember that they are made out of glass!

This activity is based on Dafna Kaffeman's way of displaying the natural world around her. The Eastern Mediterranean is full of exotic insects and plants. What is living in your backyard?

Some of us love insects and would like to start collecting them, others are not big fans of little critters. That's all OK, but out of respect for all things living, let's only make sketches of the insects we find, and collect shrubs and leaves that have already fallen on the ground.

What you need:

- Pencils (or pens) and paper (or a sketch book)
- Glue or tape

What to do: Let's go outside, whether in your backyard, neighbourhood or local park, there's a whole world of things waiting to be discovered! Let's start by making a sketch of the grass or shrubs that are growing, followed by some of the plants and interesting flowers. Have you seen any insects crawling around? Make a document of what you see.

Now let's collect some of the leaves and shrubs that have fallen. Tape or glue them next to the sketches you've made. If you are curious about the species, look them up and write the name next to each one.

Now you can hang your piece of art on the wall or keep it in your sketch book. Perhaps you're inspired to keep documenting the things that we do not always see around us!

Fun fact: Jaffa is one of the oldest port-cities in the world and the word Jaffa means "pretty"!



USA



Welcome to Newark, NJ!

Newark is New Jersey's largest city, located in the heart of the Metropolitan New York region. The US's third oldest city, Newark is one of the leading historic spots in the Northeast, renowned as the most culturally affluent region in New Jersey. While smaller than nearby New York City, just a few miles and a few minutes away, Newark has a lot to offer.

GlassRoots is the premiere youth-serving glass nonprofit in our region. Since our founding in 2001, GlassRoots has engaged tens of thousands Greater Newark-area youth with its services, including its core Youth Entrepreneurship programs, student field trips and “art-for-art’s sake” classes for the public. We harness the fire and danger of glassmaking to engage area youth. Our students develop patience, teamwork, creative problem-solving, plus the discipline and resilience they need to safely work with 2200° fire and molten glass. They gain hands-on experience in chemistry, physics, and math. They become young entrepreneurs as they develop and market their products.

In this activity you become a **Gaffer** and a **Lampworker**! In our studios, we use a very high heat, over 2000° Fahrenheit (or 1093° Celsius) to melt glass into a molten form so that it can be shaped.

Be a Gaffer (also called a Glassblower!)

Glassblowing is a challenging task that is usually tackled by a team. The lead glassblower is called the gaffer. A combination of sand and soda lime, along with coloring agents is used to produce a raw material, which is melted together to form molten glass. This glass is “gathered” from the furnace onto a blowpipe; glassblowers use air blown into the pipe combined with movements of the glass, and special tools, to quickly shape the molten glass before it cools. Once properly shaped, the art glass sculpture is placed in an annealing oven to slowly cool down the glass.



Flameworking (also called Lampworking)

This term is used to describe glass that has been heated and manipulated by using propane or oxygen torches. The artist uses rods and tubes of glass, shaping with variety of metal and graphite tools. Old fashioned lampworking used a flame created by an alcohol lamp and breath or bellows. The use of a lamp gave the technique its name. This method was and still is used to create beads, miniature glass items,

figurines and sculptures, as well as laboratory glass such as test tubes and other equipment. As the glass is being shaped, it often cools to the point where it becomes unworkable. When that happens, the glass must be reheated it to the point where it's once again flexible enough to shape further.



MATERIAL LIST

- Crayons, markers, or colored pencils
- Your imagination

PREPARE

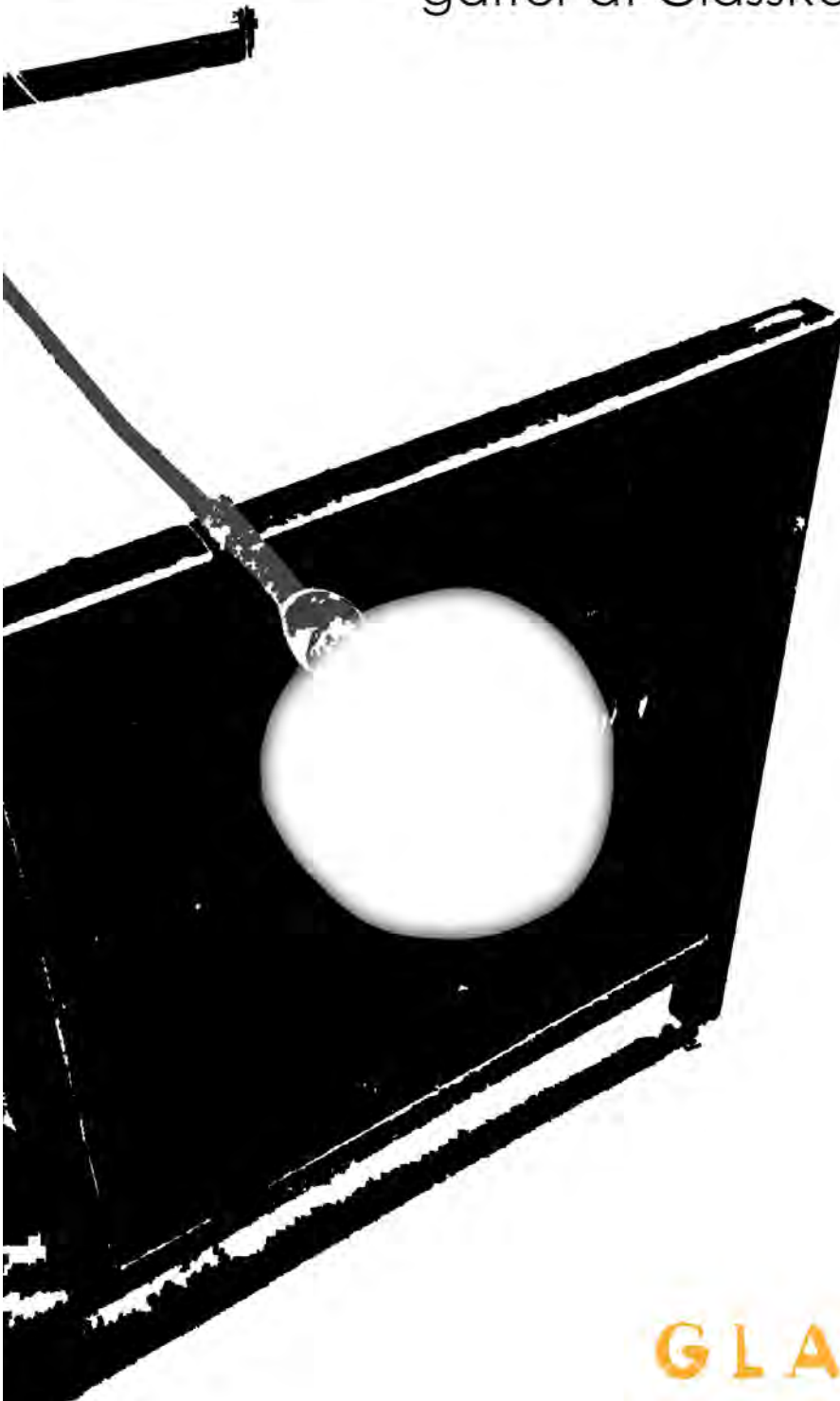
- Print the design sheets

CREATE

- On the end of the *Punty*, a hollow (like a straw) metal rod used in the glassblowing process, draw the piece you would make if you were the gaffer at GlassRoots!
- On the end of the *Mandrel*, the tool that holds your glass over the flame as you create a bead, design the bead you would make if you were the flameworkeer at GlassRoots! Did you know that when you remove the mandrel, you have a hole for the string or chain for your new necklace, bracelet or other creation!

You're the Gaffer!

On the end of the Punty, a hollow (like a straw) metal rod used in the glassblowing process, draw the piece you would make if you were the gaffer at GlassRoots!

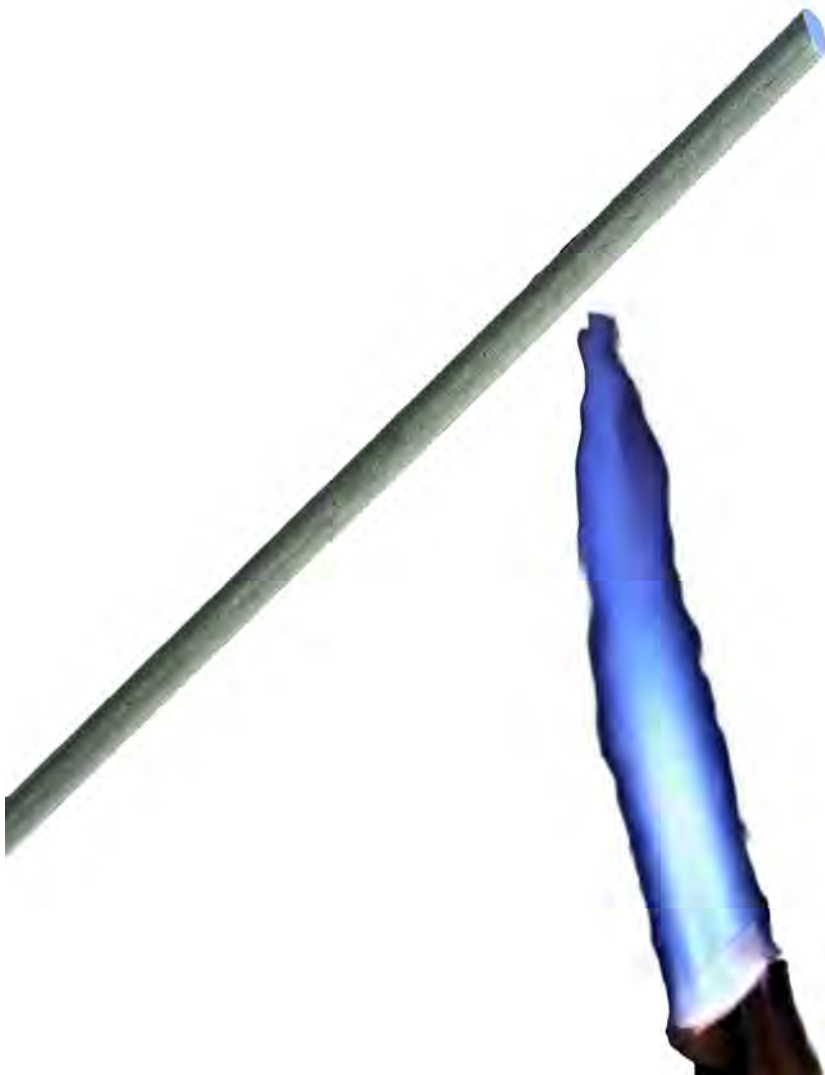


GLASS ROOTS

You are the Flamemaker!

On the end of the Mandrel, the tool that holds your glass over the flame as you create a bead, design the bead you would make if you were the lampworker at GlassRoots!

Did you know that when you remove the mandrel, you have a hole for the string or chain for your new necklace, bracelet or other creation!



GLASS ROOTS

UrbanGlass

Welcome to Brooklyn, New York!

Brooklyn is a hub of diverse cultural heritage and creativity. A colorful mosaic of historic neighborhoods filled with old brownstones, modern highrises, museums and green spaces, the city is a vibrant and welcoming place for all.

Nestled in the heart of downtown Brooklyn, UrbanGlass is a nonprofit that fosters experimentation and seeks to welcome, inspire, instruct, nurture, and propel our students forward in their love of glass as an artistic medium.

Activity: Paper Mosaics

A mosaic is a picture or pattern made by arranging together small pieces of colored glass, ceramic or stone, which are held in place with grout. Dating back to the 3rd millennium BC, mosaics originated in Mesopotamia and spread all around the world. Mosaics are all around us — from the storytelling artworks of antiquity that have endured for centuries, to the modern installations of public art that can be found throughout the subway system in NYC.

Let's discover how to create mosaic masterpieces at home using ordinary materials like paper and glue!



Materials

- **Colorful paper** (construction paper, tissue paper, magazines, etc.)
- **Coloring tools** (crayons, colored pencils, markers, paint, etc.)
- **Glue** (school glue, glue stick)
- **Cardboard**
- **Scissors**
- **String** (optional)
- **Tape** (optional)

UrbanGlass

Welcome to Brooklyn, New York!

Prepare

Cut out a cardboard shape to make your baseboard. Think of a shape that represents a person, place or thing, and draw an outline of that shape on a piece of cardboard. Cut out the shape.

Hint: You may find it helpful to draw from a reference, like direct observation, or a picture.

Gather some colorful paper. The colors you'll need will depend on your design.

Hint: Consider different color palettes like rainbow, monochrome (different shades of the same color), complementary, etc.

Cut the colorful paper into small pieces to make your tiles. You can make squares, rectangles or triangles. Cut as many tiles in different colors as you think you'll need to fill the entire surface of your cardboard. The tiles should be about the size of your thumbnail or smaller, and similarly sized.

Hint: The smaller your tiles, the more intricate your designs will be. Sort your tiles by color so that it's easier to find the color you need.

Create

Apply a background color to your cardboard. Using crayons, or another coloring tool, color in the entire front surface of your cardboard shape.

Hint: Choosing a darker color will help create contrast and make your tiles stand out. You may also leave the background plain without coloring it in.

Glue your small paper tiles to the cardboard. Adhere the colorful tiles one-by-one to the cardboard using glue. Leave a thin gap between each tile to imitate grout and allow the background color to show through. You don't want any of the tiles to hang over the edge of the cardboard, so you may need to cut some tiles down to fit inside the outer edges. Cover the entire surface of the cardboard with tiles.

Hint: You may want to dry fit the tiles onto the cardboard before gluing them down to see how they'll fit. For added visual interest, experiment with different directional patterns (straight grid, diagonal, arc, etc.) when you apply the tiles to create movement.

Voila! Once you've finished gluing tiles to the cardboard, your project is complete and you're ready for your next mosaic!

Hint: To hang your mosaic, you may choose to tie a piece of string into a loop and affix it to the back of your cardboard.

TENNESSEE

Welcome to the Appalacian Mountains in Tennessee! Artist Debra Ruzinsky, who was the Director of the Appalachian Center for Craft in Smithville, Tennessee is going to help us practice balance and keep us on center!

A) All about balance

To be a good glass blower, staying centered and balanced is very important. This activity will help you understand how to create balance!

What You'll Need:

Cardboard; craft paint; paper-towel tube; 5-inch square piece of cardboard; hot glue; floral wire or pipe cleaners; beads; 12-inch bamboo skewer with sharp ends snipped off

What To Do:

1. Cut the cardboard into shapes; paint. Paint the paper-towel tube and square piece of cardboard. Let dry.
2. Flatten one end of the paper-towel tube; staple closed. Cut a small V-shaped notch in the center of the flattened end. This will be the fulcrum.
3. Glue the open end of the paper-towel tube to the cardboard square. Let dry.

4. Thread cardboard shapes, wire, and beads onto a long skewer, balancing and adjusting it on the notch. Continue adjusting, using tape if needed for security, until sculpture is balanced.

B) Glass can be transparent, can be opaque, and is affected by light and chemical reactions between elements. This next activity explores some of these things in a fun way!

Make a secret message from invisible ink! Mail it to a friend or relative, include tips on how it works, and let them bring the image or note to light.

What You'll Need:

One lemon; cotton swab; sheet of white paper, sun, iron, or lightbulb

What To Do:

1. Squeeze the lemon juice into a bowl and add a spoonful of water. Mix gently. Dip the swab into the liquid and write a message or draw a picture on the paper.
2. Let the liquid dry completely so that the message or picture is invisible. To share your secret, set it in sunlight, hold close to a lightbulb, or iron (with adult help).
3. The message will be revealed! Hang it as artwork or share it with a friend.

How Does It Work?

Diluting or adding water to the lemon juice makes it very hard to see when you apply it to the paper, but lemon juice is an organic substance that oxidizes and turns brown when it's heated up. This means that no one will notice that the secret is there until the paper is heated and the message is revealed! Other substances that work in the same way include orange juice, honey diluted with water, milk, onion juice, and vinegar.

DALLAS

Hello friends, welcome to Dallas, Texas! Dallas is the third largest city in Texas and is home to more than one million people, with 25 million more that visit every year. It contains the largest arts district in the nation and has many natural wonders, such as bluebonnet fields, fabulous hiking, dinosaur fossils, and migrations of hummingbirds, geese, and butterflies. The tallest cowboy in Texas is the 52-foot tall greeter at the State Fair of Texas known as “Big Tex,” and the Galleria Mall boasts the tallest indoor Christmas tree in the country.

Carlyn Ray Designs and Dallas Glass Art are located in the Design District in downtown Dallas, and is a place of education, collaboration, and creativity. A center of learning and community, it provides beautiful art pieces and classes for beginners to experienced glass artists.

This activity is based on an installation created by Carlyn Ray and members of the larger community at the Ronald McDonald House of Dallas, a nonprofit family and children’s charity dedicated to supporting families with sick children. Each of the more than 700 glass butterflies was cut out, decorated, and slumped to create the illusion of flight. Because most of us don’t have access to glass or a furnace at home, this activity provides an alternative way to create fanciful flying butterflies without the need for glass-blowing equipment.

There are actually a few different ways to do this activity. Choose the way that works best with the materials available and the amount of parent/guardian supervision you have.

This [video](https://www.youtube.com/watch?v=DL19wTTROkc&feature=youtu.be) (<https://www.youtube.com/watch?v=DL19wTTROkc&feature=youtu.be>) explains the process and the science behind it!

MATERIALS LIST

- Required
 - Wax crayons in the color or colors of your choice
 - Wax paper
 - Tape
 - A pair of scissors
- Optional
 - A small grater
 - An old dishcloth or t-shirt
 - An iron

- A sharpie or marker
- An oven or microwave
- A heat-safe container
- Butterfly stencil
- Silicon butterfly molds or butterfly-shaped metal cookie cutters
- Baking sheet
- Aluminum foil

CREATE – there are four different ways to do this project. Choose the way that works best with the materials available and the amount of parent/guardian supervision you have!

Method 1 – Iron

1. Put your old dishcloth or t-shirt down wherever you plan to iron the crayons
2. Place a piece of wax paper on top of the dishcloth/t-shirt
3. Grab the crayon colors you are planning to use and remove the paper wrappers
4. CAREFULLY use the grater to get crayon shavings. There are two ways to do this
 - a. You can grate the crayons right onto the piece of wax paper and let them mix however they land.
 - b. You can make separate piles for each of your colors so that you have more control over how the colors mix
5. Place the crayon shavings on the wax paper in the desired patterns. Make it thick enough that you can't see the wax paper under the crayon shavings.
6. Place the second piece of wax paper on top. Fold and tape the edges so that the wax doesn't leak out when heated.
7. Fold dishcloth or t-shirt on top of the wax paper sandwich. This is so you can protect your iron
8. WITH PARENT SUPERVISION! Turn the iron on (lowest setting) and allow it several minutes to get warm
9. Gently iron over the dishcloth/t-shirt
10. Once you're done ironing, allow it to cool for about a minute
11. Cut out whatever shape you want. You can use a butterfly stencil, draw out a shape with a sharpie or marker, or freehand your cutting.
12. Ta-da! A beautiful butterfly! You can tape it to the window to use it as a creative suncatcher

Method 2 – Microwave

1. Grab the crayon colors you are planning to use and remove the paper wrappers
2. CAREFULLY use the grater to get crayon shavings. There are two ways to do this

- a. You can grate the crayons right onto the piece of wax paper and let them mix however they land.
 - b. You can make separate piles for each of your colors so that you have more control over how the colors mix
3. Place the crayon pieces into a heat-safe container.
4. Microwave for 2 minutes, pausing every 30 seconds to stir. Do not leave the microwave unattended – each microwave is different, and your crayons may melt faster than 2 minutes
5. CAREFULLY pour the melted crayons onto wax paper or into silicon molds. You can also add glitter, if desired.
6. Wait for the melted crayons to cool
7. Cut out whatever shape you want if you used the wax paper. You can use a butterfly stencil, draw out a shape with a sharpie or marker, or freehand your cutting.
8. Ta-da! A beautiful butterfly! You can tape it to the window to use it as a creative suncatcher

Method 3 – Oven

1. WITH PARENT SUPERVISION! Preheat the oven to 200°F (94°C)
2. Grab the crayon colors you are planning to use and remove the paper wrappers
3. CAREFULLY use the grater to get crayon shavings. There are two ways to do this
 - a. You can grate the crayons right onto the piece of wax paper and let them mix however they land.
 - b. You can make separate piles for each of your colors so that you have more control over how the colors mix
4. Find a suitable metal or silicon mold or metal cookie cutter (don't use plastic – it will melt!)
 - a. If using metal cookie cutters, place them on top of a piece of wax paper
5. Place the silicon mold or the wax paper on a baking sheet
6. Place the crayon shavings into the silicon mold or metal cookie cutter in the desired pattern
7. Place in the oven and bake for 10-15 minutes.
8. Once the crayons have completely melted, put the baking sheet out of the oven with oven mitts or something to protect your hands (it will be hot!)
9. Allow the wax to cool and harden – you can speed this up by placing the molds in the freezer for 30 minutes
10. Ta-da! A beautiful butterfly!

Method 4 – The Sun

1. Lay out a piece of wax paper
2. Grab the crayon colors you are planning to use and remove the paper wrappers
3. CAREFULLY use the grater to get crayon shavings. There are two ways to do this
 - a. You can grate the crayons right onto the piece of wax paper and let them mix however they land.
 - b. You can make separate piles for each of your colors so that you have more control over how the colors mix
4. Place the crayon shavings on the wax paper in the desired patterns. Make it thick enough that you can't see the wax paper under the crayon shavings.
5. Place the second piece of wax paper on top. Fold and tape the edges so that the wax doesn't leak out when heated.
6. Place the wax paper out in the sun.
 - a. TIP: Place the wax paper on top of a piece of aluminum foil or a baking sheet to help it melt faster
 - b. TIP: Wrap the baking sheet in plastic wrap to help hold the heat in and melt the crayons faster
7. It can take up to an hour for the crayons to melt, depending on the temperature outside and being in the direct path of the sun's rays. Ideally, it should be over 100° F (38°C)
8. Once the crayons are melted, bring them inside (CAREFULLY) to cool
9. Once cooled, cut out whatever shape you want. You can use a butterfly stencil, draw out the shape with a sharpie or marker, or freehand your cutting.
10. Ta-da! A beautiful butterfly! You can tape it to the window to use it as a creative suncatcher

ADDITIONAL WEBSITES TO CHECK OUT

- If you are interested in butterflies, you can check out –
 - Texas Discovery Gardens Butterfly House: <https://txdg.org/butterfly-house>
 - Dallas County Lepidopterists Society: <http://www.dallasbutterflies.com>
 - The Heard Museum: <https://www.heardmuseum.org/butterflies>
 - Texas Parks and Wildlife: https://tpwd.texas.gov/publications/pwdpubs/media/pwd_bk_w7000_0752.pdf
- If you are interested in wax art, you can check out –
 - <https://www.instructables.com/id/Wax-Canvas-Art/>
 - <https://www.diys.com/crafting-with-wax/>

- <https://www.artycraftykids.com/art/wax-resist-art/>
- If you are interested in Carlyn Ray's butterfly project at the Ronald McDonald House or seeing some of her other projects, you can check out <https://carlynraydesigns.com>
- If you are interested in learning more about conduction, convection, and radiation, you can check out –
 - <https://keydifferences.com/difference-between-conduction-convection-and-radiation.html>
 - <https://www.youtube.com/watch?v=HpCvWuvCUoA>
 - <https://www.youtube.com/watch?v=xGKg3TSO4v8>
 - <https://www.machinedesign.com/learning-resources/whats-the-difference-between/document/21834474/whats-the-difference-between-conduction-convection-and-radiation>
 - <https://kera.pbslearningmedia.org/resource/lsp07-sci-phys-thermalenergy/thermal-energy-transfer/>