



Hazelrock
♡ HOUSE

LEARN HOW TO MAKE

Fused Glass

A BEGINNERS GUIDE

WWW.HAZELROCKHOUSE.COM

Welcome

We'll soon have you making your own fused glass!

Your Teacher is
Emma FitzGerald



I began glassmaking in 2014 when my other hobby (making soap) turned into a job. I was fascinated by the colours and textures achievable in glasswork so I have been experimenting for a good few years. I look to nature for inspiration along with my love of all things mid-century and retro. I particularly enjoy creating texture with frit.

I have a background in science, achieving a BSc (Hons) in Genetics and a Masters Degree in Medical Laboratory Science from Queens University, Belfast. I was also awarded a Postgraduate Certificate in Science Education from University College, Worcester.

I founded Purple Herb Soap in 2010 which I closed in 2015. I now enjoy teaching Soapmaking and Fused Glassmaking to curious and resourceful individuals at the Hazelrock House Studio in Stirling, Scotland

I'm now here to help you to begin your journey into Fused Glass. Don't worry, I've got your back.

www.hazelrockhouse.com

Equipment.

The Kiln

The kiln is the key piece of equipment you need to get started with fused glass (of course you can't fuse glass without one). You can rent space in a kiln if you are lucky enough to live near a glassmaker that offers such a service. I did, but as I was only making small pieces of jewellery this wasn't really cost effective for me.



Microwave kiln, Glass kiln (element in the lid), Ceramic kiln (element in the kiln body)

I tried a microwave kiln first. On paper, it seemed like a good idea. But one melted microwave later and I sent it back to the store. I wouldn't recommend them. Eventually, I found a kiln going second hand. It is a paragon 7 and is still working perfectly today.

Some things to consider when buying a kiln (new or second hand)

Are you going to be making only fused glass or do you want to make ceramics as well? Fused glass kilns generally have the heating element in the lid whilst ceramic kilns have heating elements in the kiln sides. Fused glass is generally created flat(ish) so a heating element in the lid heats the surface evenly. Glass kilns heat up high enough for some of the low fire clays but not high enough for all clays for example porcelain. So if you also want to fire ceramics you should choose a ceramic kiln as you can fuse glass in it as well. If you are only making fused glass then choose a glass kiln as the temperature will be more evenly distributed over the surface of the glass.

Manual or programmable kiln?

Manual kilns have a power switch and a dial to control the temperature. Inside they have a pyrometer to detect the internal temperature. But you are the one who gets to have the control. During a firing schedule, there may be 4 or 5 different temperatures so you will need to be with your kiln throughout the firing to change the temperature when required.

A programmable kiln has a temperature controller which automatically changes the temperature for you and even turns the kiln off when it is finished. You can go about your day as normal or run your kiln while you sleep. You can usually set a few different firing schedules in each programming unit. I would recommend this one.

What size will you need?

If you only intend to fuse small pieces of jewellery in your kiln you will need a much smaller one than someone who wants to fuse large pieces. Or do you need to produce a large number of pieces to sell?

Larger kilns tend to need a dedicated electrical supply to function. Smaller kilns can use the normal electrical sockets in the house.

You should also have a think about where you will place your kiln. You should make sure it sits on a heat resistant surface and is clear of any curtains, fabric or other flammable materials. Make sure there isn't a shelf close above that would be affected by the heat and make sure you have plenty of ventilation.

Cutting Tools

For a beginner, the only tools you will need are some tools for cutting. You need a glass cutter which has a small wheel inside which scores the glass. There are a wide variety of designs and shapes available depending on which you prefer.

Most use oil for lubrication and some don't.



Once the score is made you can use a pair of breakers or running pliers to separate the two pieces. Breakers/runners exert a pressure either side of the score line which makes the glass split along that line. This works best with straight lines on flat pieces of glass.

If you are cutting curves or circles you can use a pair of grozing pliers instead. With grozing pliers, you are pulling or twisting the piece you want to remove after you have made a score. Mosaic nippers are also very handy if you want to split very small pieces or nip small sections from a glass rod.



Breaking / Running Pliers,

Grozing Pliers,

Mosaic Nippers

Cutting Surface.

You will need a surface to cut on. You can use something as simple as a piece of cardboard to protect your table. Many people use a crafters self-healing cutting mat.

Once you are cutting large pieces of glass you may want to invest in a cutting surface such as the Morton system. This is a plastic surface with spaces in which allows any small fragments of glass to fall away so you don't cut yourself with them.

It has a variety of handy attachments which aid your cutting and a ruler to help measure. There are many other cutting systems such as the G-manu, Cutters Mate, and the Beetle Bits system.



Morton System,

Taurus Ring Saw,

Dremel Drill

Once you have got the hang of this you might consider investing in a larger cutting device such as the Ring saw. They are a reasonably large investment but allow very specific cuts to be made. Definitely very useful if you plan to sell your work. Other useful pieces of equipment you may find you need around the place might include a Dremel style drill for cutting holes in glass. You can use this along with a diamond drill bit to make holes which you will need if you make glass jewellery or hanging pieces such as suncatchers. You can then insert the wire or whatever you are using directly through the glass.

Cleaning Up

Cutting glass results in tiny splinters which will fall onto your cutting surface. You need to be able to clean these up quickly to avoid cutting yourself. A dustpan and brush will do. You could use a handheld vacuum cleaner (one with a HEPA filter is useful if you are working with glass powders).

Or I find wiping the surface with a damp wipe or disposable kitchen towel picks up any glass fragments then it can be thrown away in the rubbish bin.

Coldworking. Grinding and Polishing.

For an absolute beginner, you might want to try coldworking by hand using diamond hand pads. These are pads which are encrusted with diamond fragments in various sizes. They come in 60, 120, 220 and 400 grit and you would start with 60 grit (the coarsest) and then work your way through each one in order to achieve a smooth finish. To be honest this work is so tedious and time consuming that most people don't bother. It is a much better idea to invest in a tabletop grinder. These are relatively inexpensive and are worth every penny in my opinion! They are cooled by water and enable you to quickly and easily smooth any edge.



Diamond hand pads, Benchtop grinder, lapidary grinder

If you decide to go on to larger things you can invest in a wet belt sander or a flat lap (lapidary) grinder. Both of these options would be for the serious enthusiast or professional glass artist as some require a dedicated electrical supply (although you can get some smaller ones which run on a domestic supply). They are also very messy pieces of equipment and would be more suited to an outdoor shed or workshop. (You wouldn't want one in your house!) You would also need both of these to be connected to the water supply and have some means of disposing of wastewater containing glass powder.

The flat lap grinder is very useful for grinding flat surfaces or straight edges. It is particularly useful for grinding the edges of dropout vessels. The wet belt sander is a little more versatile as it is able to smooth rounded or curved edges as well which is useful if you make large glass plates or bowls. Don't forget these methods of grinding would also require the pieces to be fire polished if you are looking for a really smooth glossy edge.

In concentrating on the equipment I nearly forgot a few other important things for your studio. Something comfortable to sit on, a sturdy table to work at, storage for your glass and maybe a radio or mp3player. Also pencils, paper and markers that write on glass are handy. Coffee or tea making equipment might be most welcome in order to facilitate the creative process. Leave the gin until later!

Pinterest is a fantastic resource in order to see what techniques are out there but be careful that you don't get so into it that you copy. Use the images you see to inspire you and inform you instead.

If you would like to learn more about making fused glass, you can follow Hazelrock House on Facebook, Instagram, YouTube and Pinterest.

<https://www.facebook.com/hazelrockhouse/>

<https://www.instagram.com/hazelrockhouse/>

<https://www.youtube.com/channel/UCteKQq-fTcsWK2rr2h5Q17A>

<https://www.pinterest.ie/hazelrockhouse/>

I will be continuing to post helpful information on the blog. If you have subscribed to be a 'Housemate' I'll give you a shout when new posts and projects happen and a lot more besides.

If you are having trouble with anything that you have read about in this guide I would be happy to answer your questions. Just email me at hazelrockhouse@gmail.com or post your question on the Facebook page.

I would encourage you to keep being curious about fused glass making. There is so much information out there but some is not reliable so please just ask if you need help.

Good luck with your fused glass journey. I hope I can serve you in your quest for knowledge!