Getting Started in Mosaics...
What to Expect

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Getting Started in Mosaics – What to Expect

Since you're reading this, my guess is you've been bitten by the mosaic "bug." Welcome to one of the most fulfilling and fun forms of art! Our numbers are growing every day! There are 7 things that are good for you to consider early on:

• Part 1. Safety & Methods
• Part 2. Design
• Part 3. Tesserae & Tools
• Part 4. Cutting Tesserae
• Part 5. Backers & Adhesives
• Part 6. Grouting
• Part 7. And finally, cleaning and detailing

Part 1. Safety
Now, before you start any mosaic project, the very first step is to ensure your safety. With many of the activities and materials you will use in mosaics, you should wear protective eyewear and occasionally a facemask. Glass shards, powders from thinsets and grouts, and many other things can be hazardous to your eyes and lungs. So, be sure to practice safety in all that you do. Another safety tip is to never use your hands to "brush" away shards. Always have a small brush available for frequent sweeping away of these sharp pieces. Even though I am careful, I always have a box of band-aids on hand just in case.
Methods
There are many different methods mosaic artists can use when creating a project: direct, indirect, double reverse, double direct, modified double reverse and probably more. For this overview, I will mention the 2 most common ones, direct and indirect. The direct method is what I recommend all beginners start with.

The Direct Method:
Using the direct method means adhering your tesserae (tiles, glass, etc.) directly onto the base (or substrate) you are mosaicing to. It is the easiest method and one I recommend for beginners. In fact, it is my favorite method to use. I enjoy working this way because you can see the design taking shape right away and can correct where needed. If you create a 3-D mosaic, you will mostly likely use the direct method.
The Indirect Method:
The indirect method is also sometimes referred to as the reverse method, and is a little more complicated than the direct method. For the indirect method, you will start with a pattern that is drawn in reverse. You will temporarily place your pieces, face down (or upside down), to a surface such as heavy brown paper that has been coated with a glue that is water soluble. You will be basically working with a mirror image. After you finish placing your tiles and it is dry, the entire mosaic can be flipped over and the back side of the tiles put into a bed of thinset or mortar. After the mortar dries, the paper is then soaked away from the top of the tiles and you will see your design. You can then clean and grout as needed. The main reason for using the indirect method is if you have varying depths of tesserae, the larger more uneven pieces will bury down into the adhesive, leaving a smooth top surface. This is important for floor mosaics and tabletops where you need your surface perfectly smooth.
Part 2. Design

Creating a mosaic design is very different from other art forms, because we are working with solid materials trying to blend colors, create color gradients and flow, and this is very challenging. Therefore, designing a "cartoon" or pattern for your mosaic that integrates these issues is very important. There are 5 main considerations you should address before beginning your design: tesserae, flow, colors, simplicity and pattern.

First, consider the tesserae you want to use. Sometimes one particular tile or type of material can be your inspiration. In addition, choosing tesserae that has different thicknesses, or needs different adhesives, uses different cutting tools, are all details you will need to plan for.
Flow, or the laying out of your tiles, is very important to the design. Some terms you should be aware of: Andamento and Opus. Andamento refers to the flow and direction of your rows of tesserae. Opus refers to the actual pattern of the tesserae. These are important because they affect the movement of your tesserae and impacts your entire mosaic. There are many techniques such as opus regulatum, opus vermiculatum, opus palladianum, opus tessellatum, and opus circumactum that describe particular ways tile is laid. Be aware of these terms, and I encourage you to research each one at your convenience.

Third, color is a very important consideration for your design. When choosing colors, it helps to lay them out beside each other so you can see how well they work together. Contrasting colors tend to intensify each other so experiment with different colors until you find something that works for your project. Using a color wheel can help you make your decision too.
Simple, simple, simple. Keep your design as simple as possible by eliminating unnecessary and confusing details. Simpler is better; as you are working with lots of small pieces to create one image, you need to let your viewer easily see what you are trying to convey. Too many small puzzling details will detract. Some of my favorite mosaics by other artists have very simple designs.

Lastly, the cartoon. After you have your design decided upon, you can either draw it to full scale, or if you're like me and can't draw very well, you can use software applications like Photoshop to create your design (cartoon) in. You will need a full size, printed pattern to work from. If you don't have your own printer, office supply stores can print them for you. Here's a good example:
You will then need to transfer your design onto your backer (base or substrate). Depending on what your backer is, you will have different options. Here's a couple. One option is to use carbon paper which you will place in between your pattern and your backer and trace over the lines, transferring the cartoon onto your backer. Another option applies if you use fiberglass mesh as your substrate. If so, first tape your pattern down to your table, then tape clear plastic wrap over your pattern to keep the pattern from sticking to your fiberglass mesh. Then tape your mesh down over this and you can start glueing your tesserae directly to the mesh. "Butter" the back of each of your pieces with your adhesive, then lay them onto the mesh.
There are still many other options for transferring your design to your substrate, so decide upon the one that works the best for your project before you begin.

**Part 3. Tesserae and Tools.**
Let's talk tesserae. Tesserae is a term for any object used in creating a mosaic; for instance, vitreous tiles, stained glass, found objects, ceramic tiles, smalti, etc.

For beginners, I recommend starting with vitreous tiles. These are generally ¾" square glass tiles that come in many different colors, generally on a mesh sheet or by the pound, and can be purchased from craft and home improvement stores or ordered online from mosaic suppliers. Easy to cut with wheeled nippers, they are fine for interior or exterior but check first with the manufacturer to see if they are rated for floors, as they may be very hazardous when wet and may crack if something drops on them.
Stained Glass is another material mosaic artists use. It can come in glass sheets, already cut pieces such as NippinGlass, and sometimes you can buy it by the pound from someone's scrap. Wheeled nippers work well with Nippinglass; however, to cut glass sheets and large pieces, you will need to have special stained glass tools for scoring and breaking it.
Found objects are just what they say they are, objects you can find all around you. Pebbles, shells, stones, almost anything you think is interesting can be used in a mosaic. Generally, you will use a thick layer of thinset to imbed them into and these objects are usually not grouted, due to having surfaces that are not easily cleaned from grout.

Ceramic tiles are commonly used and easy to buy at home improvement stores or perhaps scraps from your local tile store. You can cut them with nippers, tile cutters or break them with a hammer. They come in a variety of colors and have a hard glaze on one side.

Smalti, millefiori, mirror, and other miscellaneous tiles are fun to use. They add great splashes of color and detail. Make sure you use an adhesive designed to be used with each of these.

China is another material that is used frequently. Old dishes, cups, bowls, can be broken or cut and will give your mosaics a cool 3-D effect. Most dishes have curves to them, so you will have to take this into consideration before cutting and gluing it if you need a flat piece.

**Tools: a Mosaicists' Arsenal**

For most of the mosaic artists I know, wheeled nippers are their main tool. They will cut most of the tesserae I've mentioned and are easy to use.

Another helpful tool, Skeewpicks are new to the marketplace and are extremely handy when you need to clean and detail your mosaic. They get in and around tiles better than others and are easy to use. Watch this video to see how Skeewpicks work: [http://bit.ly/1JMROGp](http://bit.ly/1JMROGp)
Tile nippers are another favorite and can also cut most tiles. Using only part of the blade, and cutting in from the side of the tile, squeeze firmly.

For cutting large pieces of stained glass, some of the special tools you'll need is a glass scorer which will make a score on the glass and then you will use a running plier to "snap" the glass apart.

Grinders are another helpful tool for getting rid of those rough edges that nippers or other cutters can leave. Here's another video that will show you how well a grinder works. Watch it here: [http://bit.ly/1JMRQy1](http://bit.ly/1JMRQy1)

A tile cutter is used by tile layers for cutting larger pieces of ceramic tiles. The lever will score the top and then when you press harder, it will break the tiles.
Other tools and supplies you probably already have and will need in time are listed below. There are probably more but this is a good start:

• Tape measure
• Sponges for spreading grout
• Pencils
• Markers
• Rulers
• Tweezers for small pieces hard to handle
• Rags to clean grout
• Buckets for mixing thinset and grout
• Float for applying grout on delicate surfaces
• Trowel for applying thinset in large areas

**Part 4. Nipping (Cutting) Tesserae.**
There are different types of nippers that mosaic artists use. Tile nippers and wheeled nippers are probably the most common. Tile nippers work well with unglazed ceramic tiles. Wheeled nippers work well with vitreous glass, stained glass, mirror, and several other materials as well. Most of my experience is with wheeled nippers. I recommend Leponitt nippers as they perform the best, in my opinion.
When using wheeled nippers, wear safety glasses. Shards can fly and if you want, you can nip over a container in order to catch your nipped pieces. Then hold your nippers as parallel as possible, and place your tesserae in between the two wheeled blades. I generally wrap my other hand around the bottom of the tesserae, (to keep shards from flying) and squeeze firmly.

Sometimes I like to hold the corner of the vitreous glass with my thumb and forefinger, then use my nippers to cut it. This seems to allow me to nip faster when I am cutting a lot of tiles at once.

For cutting large pieces of stained glass, you will need a glass scorer and a running plier. Using the glass scorer, make a score on the glass and then using the running plier, line up the score line with the line marked on the head of the plier, and squeeze gently until the glass breaks.
Smalti and marble are usually cut using a hammer and hardie. A wooden log securely contains the hardie in place while you position the smalti on its edge. Then, using your other hand holding the hammer, deliberately strike the smalti, breaking it in half. You can continue to turn the piece and cut it in smaller pieces with the hammer. Just be careful not to strike your own fingers as the pieces get smaller – ouch!

China, porcelain, and other dishes can be cut using wheeled and tile nippers, as well as a hammer. I generally use my wheeled nippers and take a big "bite" out of a dish and then work it down into smaller pieces, as my mosaic demands. If you want to break several dishes all at once, place them on a hard surface, cover with a cloth or newspapers and using your hammer, make sharp taps on the dishes. You can also use a wet saw to cut plates and other dishes. A hammer works well with thicker ceramic tiles as well.

I recommend practicing cutting different materials to see what you like to work with the best. Then, experiment with cutting squares, triangles, nibbling out circles. After you master these, try cutting different shapes like longer pieces with curves. And, look at other artists' work, notice the shapes of their cuts and how they created a feather or an animal's fur.

**Part 5. Backers and Adhesives.**

Choosing a backer and the appropriate adhesive is very crucial to the success of your mosaic project. Being familiar with your choices in backers and adhesives will help you achieve the desired result you want with your mosaic piece.
Backers:
Backers, bases, substrates, all refer to the same thing – what you will mosaic on. Normally, backers should be nonflexible surfaces, but there are some exceptions such as mesh. Always start with a clean surface and make sure your base will be able to support the weight of your tiles, adhesives and grout.

Porous bases like terra cotta pots, wood, MDF, etc., should be sealed. You can use a mix of white craft glue and water to seal them before you mosaic. If not sealed, you run a risk of your tiles popping off since the base will absorb the moisture from your adhesive and weaken the hold. Plywood is best for indoor projects as it can expand and contract in cold climates. Keep in mind that wood eventually will decay if exposed to moisture.

Tile backer boards (wedi board), ceramic, stone and cement bases need no sealing. They are great for outdoor or wet areas as well. Cement backer board is another choice for outdoor projects, although it is very heavy and harder to cut. Fiberglass Mesh is a great way to work on a project in your studio, off-site. You place it over your pattern, which is protected by clear plastic wrap, and glue your tiles to the fiberglass mesh. It is ideal for large mosaics that may need to be cut into sections. Be careful of the fiberglass as it can irritate your skin.
Styrofoam is another fun material to use as a base. You can sculpt it, or buy it in shapes like a ball. I like to apply a thin layer of thinset and then while it's wet, cover it with fiberglass mesh to give the Styrofoam extra strength and durability. Then I use thinset to adhere my tesserae to it.

**Adhesives:**
There are a myriad of adhesives that are used in mosaics. Everyone has their favorite and there are differing opinions on what works. So, here is a general overview for you.

White craft glue (I use Weldbond), is great for indoor projects. You can use it for gluing glass, vitreous tiles, and many more materials. It is also used in sealing backers, as mentioned above. It dries clear, is easy to work with and clean up.

Mirror adds great shine and reflectivity to mosaics and is fun to have in your art. You should use a silicone sealant to glue mirror down. Do not use white craft glue as in time it will eat away the silver backing leaving a black spot.
Thinset (mortar) is what I use for my outdoor projects or for mosaics exposed to wet areas. You can use thinset on just about any tile, glass, found objects, smalti, marble, dishes, etc. It is a little more challenging to work with as you need to control the amount you use so it doesn't interfere with your grout lines. It comes in powder or pre-mixed. You can add colorant to it and use it for both your adhesive and your grout.

For metal surfaces, epoxy can be used. It is a 2-part adhesive and has strong fumes, so work in a ventilated area. Silicone adhesive works well for glass on glass. It is clear and waterproof.

These descriptions of bases and adhesives will help get you started. There are many others that mosaic artists are using, so I encourage you to continue to research and share your own experiences with our mosaic community.
"Grout is your friend." My motto! Grout color is super important and is a common question people ask me with regard to their project. Your grout color should pull everything together and not interfere with your design. Here's what I learned from Sonia King: white grout fractures, black intensifies, and gray blends. So choosing your color depends on the effect you are going for.

White grout is great for white broken dishes and areas that you want to keep a bright white color. However, any errors you make are accentuated by white. Black works well when you use lots of bright colors in a mosaic but it can also overpower your piece, and gray is always a safe choice. Not easy to choose, huh? If you are unsure of which color, sprinkle some dry grout powder into your mosaic and see if you like it. After you decide, you can then brush it out. Remember, the color you see when it is a dry powder is the color it dries back to.
I recommend using sanded grout with polymers as they help strengthen your mosaic. When you mix your grout, start with a tiny amount of water in the bottom of your container, then slowly add grout. A little water goes a long way! Keep adding both until you obtain that "peanut butter" consistency. After you mix your grout, let it sit for about 10 minutes so the chemicals will have time to work.

If possible, try to buy a grout that is already the color you like. If you can't find one, I recommend Tints-All. It is a colorant that is very concentrated and a few drops added to your white grout will provide a nice, rich color. You won't achieve this with adding acrylic paints.

After you have spread your grout (using a float) on your piece and removed the excess, let it sit a few minutes. Then I recommend using the dry-method to clean your mosaic. Using clean, dry rags, gently wipe the tops of your tesserae, while moving your rag to a clean spot so you don't "drag" the grout around. Continue this process until you have a nice, clean mosaic. Let it sit for 24 hours, then wipe with a wet cloth or sponge. If you see any grout "haze" use vinegar and water and lightly rub on top to remove the haze and shine up the tiles.
Grout really is your friend – it pulls your colors together, hides flaws, and creates a long-lasting work of art.

**Part 7. Cleaning:**
This last section is about after you have grouted your piece. As I mentioned in Part 6, if you continue to see any grout "haze" use vinegar and water and lightly rub on top to remove the haze and shine up the tiles.

Other clean up challenges can be grout trapped in those tiny crevices of porous tiles or tiles that have texture. These can be frustrating. Try using a tool with a sharp, narrow point to get in there to remove those annoying spots. Skeewpicks are a set of 4 tools that I use and work great for these types of challenges. (Here's a [video](#) I made showing how they work)

**Detailing:**
How do you finish out the edge of your mosaic? The most common way is framing. If you don't have it in a frame
already, you have some options. You can try painting the edges of your wood or wediboard. You can also wrap your wediboard edge with fiberglass mesh and thinset, then paint. Other options for edging can be gluing fabric, rope, tiles, metal strips, just whatever compliments your design.

Don't forget to paint the back as well, this will give your piece a nice, finished look. If you are hanging it in a gallery, printout your bio and tape it on the back. People want to learn about you, the artist, when purchasing your work.

Sealing your mosaic is another question I am frequently asked. Years ago, a professional tile layer and all-around cement "guru" told me that grout needed to "breathe". So since I work mainly in glass, I do not seal my glass mosaics unless there is a possibility of the grout being stained, like in a kitchen backsplash. However, if you are using porous or unglazed ceramic tiles, and unpolished stone, then sealing is necessary. There are grout and tile sealers as well as sealers for stone in local home improvement stores.
Cleaning and detailing are very important finishes you need to put on each mosaic piece you create. It just raises your creativity to a higher level. So go, mosaic and have fun!