



Glazing

Pottery glazes are a liquid suspension of finely ground minerals that are applied onto the surface of bisque-fired ceramic ware by brushing, pouring, or dipping. After the glaze dries, the ware is loaded into a kiln and fired to the temperature at which the glaze ingredients will melt together to form a glassy surface. Glazing your ceramics serves several purposes. Not only does it add a safe, sealed coating to your bisque-fired wares making them food safe (usually) it also brings your work to life with color. The possibilities of glazing are endless and the techniques and patterns you can create with them have no limit. We use the brush-on or sponge-on method.

We use Mayco Foundations® glazes in *gloss opaque and gloss translucent-sheer finishes*. These glazes are easy to apply, dry quickly and allow for same day firing. *Foundations® are AP Non-Toxic, Food Safe and Dinnerware Safe when used according to manufacturer's directions*. The opaque colors produce a smooth high gloss finish and can be intermixed for custom colors. The translucent glazes add a hint of color and showcase surface textures, allowing designs to show through. They provide darker accents in any crevices.

We also stock Mayco Jungle Gems™ Crystal Glazes which transform in the kiln when small pieces of glass burst into color during the firing process producing dramatic colorful effects. These glazes can be used in combination with Foundations opaque and sheer glazes. These glazes are certified as non-toxic, and suitable for artists of all ages. However, Jungle Gems™ are for decorative wares only and not recommended for dinnerware, as these glazes can exhibit surface textures such as cracks and crevices and the underlying porous ceramic may absorb water and fail and not be able to be adequately cleaned.

General Use

- Shake bottle for 5-6 seconds before use. Dispense glaze onto a palette or bowl and apply with a brush or damp sponge.
- Jungle Gems™ may need to be stirred (use stir stick or spatula) to loosen and mix the crystals from the bottom. Then shake well. Use a fan brush to apply. Avoid heavy application of crystals near bottom of ware, as glaze and crystals will melt when fired.
- Apply 2-3 coats on bisque, allowing the surface to dry in-between coats.
- Glaze fires to high-gloss finish and does not need to be clear-coated.

Glazing Tips

- After bisque firing, keep your creations clean and dry. Only handle your pieces with clean, dry hands. Lotions, or even the oils from your hands, can create resist spots where glaze adheres unevenly or not at all.
- Since the glaze is thick, a lot adheres to the stir stick and bowl. With a finger, paintbrush or spatula, wipe as much glaze as possible back into the bottle. Glazes are quite expensive so please try to minimize any waste.
- Each glaze color has a unique formula, some are very thick, and some are very thin. Glazes can thicken over time, this is normal. However, if after shaking the bottle well, you think a glaze is too thick, add a few drops of water and shake or stir well. Repeat until desired consistency is reached.



- Instruct children to glaze lighter colors first, then apply darker colors. Glaze the larger background areas first is recommended, let it dry, then put the smaller details on top. Glaze generally dries quickly, within a few minutes.
- Any areas that are intended to be white (e.g. Santa's beard, or a snowman's body), can be left unglazed by the student, then clear glaze applied after class. Clear glaze can be painted over any other glaze color and the under color will come through clearly.
- *Glaze mistakes can be corrected easily by wiping off the glaze with a wet sponge, then repainting.* Small amounts of dry glaze can be scraped off using a fingernail or cutting tool.
- Any brush bristles stuck in the glaze will simply burn away in the kiln; there is no need to remove them.

Glazing with Children

Too many glaze choices often make your glazing experience a bit chaotic. We recommend giving students 4 to 5 different glaze choices. It also works well to create glazing stations where 4 to 6 students glaze together. You can also rotate the students to the glazing stations: as one student finishes another student rotates in. An alternative to these, are using individual palettes, where each student chooses their own glaze colors. In this method, parent volunteers dispense the glaze onto the palettes using plastic, disposable spoons.

- Glaze mats (11x 17 paper) and large tablecloths for outdoor tables are available in PTA closet to protect the work surfaces. Do not use the clay mats or newspaper. After use, dispose of or clean glaze mats or tablecloths with a wet sponge or paper towel. Some volunteers prefer to purchase disposable dollar-store-type tablecloths, making for easy clean up.
- Use the glaze color-matching bowls for your glaze (bowl color matches glaze color). Pour no more than about ½ to 1 inch of glaze into the bowls at one time. Or ¼ inch if using a glaze as an accent color.
- Take the stand-up glaze color tiles for your glaze choices to the classroom and place on the table so that the children can see what each glaze will look like after it has been fired. Some of the glazes look completely different in the liquid form than they do after firing.
- When glazing in a group, rather than give each child his or her own paintbrush, put 3-4 brushes of various sizes in each color. This eliminates the need for the children to rinse off their brushes with each color change, which wastes a lot of glaze. *Please impress on the students, and monitor them, to put the brushes back in the correct color. Glazes should not be mixed.*
- Educate the children that crystal glazes have flecks of glass crystals in it, which are sharp and can cut the skin.
- Instruct student to wash their hands after they've finished glazing their bisque.

Glazing the Underside of Projects

The bottoms or back of many clay projects, especially small animal figures such as fish and frogs or wall plaques may not need to be glazed because it makes firing them more difficult. Small pieces are very difficult to stilt when firing in the kiln. However, some projects such as the spoon rests, ornaments, plates and others should be glazed on the bottom for reasons of aesthetics.



Fixing Broken Pieces

Bone dry greenware and bisque are very fragile and is easily broken. Take care when handling and transporting. It is not uncommon for a project to crack, or pieces break off during the drying process or when it is fired the first time. Broken projects and projects with separated parts can usually be repaired after the final firing. Do not throw the pieces away. Keep them together and glaze them as usual, except instruct the child to keep the glaze off the broken surfaces.

- The break must be kept clean so that the pieces can be properly glued back together. *An industrial strength adhesive such as E6000 or a two-part epoxy like JB Weld, has been very effective after the final firing to glue pieces back together.* We stock both products in the PTA closet, behind the crystal glazes. It is also available at Michaels.
- Please do not try to glue bisque pieces together with glaze unless the broken piece sits directly on top of the base piece, where gravity will assist in melding the two pieces together. However, if the broken pieces are side by side, or off center, as glaze melts during firing, the pieces will slide off each other and weld to each other at odd positions or even adhere to the kiln shelf or a nearby piece of ceramic.

Absent Students

- If you are not doing a make-up session, have another student, volunteer or teacher glaze the absent student's project.
- If you are doing a make-up session for absent students, make arrangements with the teacher for absent students to glaze their projects when they return.

Over-Glazing with A Clear Coat

All our glazes have a gloss finish and if the kids do a good job covering their piece with glaze, a clear-coat overcoat is not necessary. However, any unglazed surfaces will remain rough and will result in the dull texture of bisque, making the project look unfinished.

- For younger grades, almost all projects will require a clear coat overcoat, but many of the older grades, the students do a great job of glazing their pieces and no overcoat is required.
- Parent helpers should apply the clear coat overglaze in the PTA closet or at one of the tables outside the classroom. The clear coat can be applied as soon as the regular glaze has dried, usually after about 5-10 minutes.
- Only the areas that were left unglazed by the student need the overcoat. Applying clear glaze to the entire piece is a waste of glaze.
- Clear glaze is supplied in large gallon bottles and is mint green in color. It will dry to an opaque green. Don't worry, once fired the colors underneath will be clear and glossy.
- When applying a clear coat, use the large brushes, and quickly apply a heavy coat. Excessive brushing may dissolve the glaze underneath, blurring the colors on the project and tainting the unused clear glaze.

Cleaning Glaze from Holes

Some projects have holes in them for stringing an ornament or hanging on the wall. After the projects have been glazed, the parent helpers must clean out any accumulated glaze from these



holes. Glaze melts when fired and drips into the hole will permanently fuse the hole closed. Toothpicks or the sharp cutting tools work well to clean glaze from the hole.

Cleaning Up

- Please use the spatulas to scrape as much glaze as possible out of each bowl and back into the glaze bottles. Wipe the excess glaze from the brushes back into the bottles.
- After use, wipe off the top of the bottle and threads, then wipe the threads on inside of the lid with a damp sponge. Glaze left on the threads can make it difficult to open and crusted remnants end up in the bottle. Wipe any drips off from outside of the bottles as well.
- Have students put their paint brushes in the water bucket in sink.
- Volunteers wash paintbrushes thoroughly in the bucket, then rinse under clean water.
- Wipe off or dispose of the glaze mats, tablecloths with a wet sponge.
- Wipe down desks, tables and counters.
- Wash the glaze bowls and dry
- Return glazes, color tiles and other supplies away in the PTA closet

Transporting Projects to Kiln Shed

Transport your project to the kiln shed for storage until you're ready to glaze fire. Your project boxes should be stacked on any empty shelf. Make sure your boxes are labeled with the teacher's name.

After Glazing, Next Step

After the projects have been glazed, they can be fired as soon as the glaze is dry. This is called firing your Glazeware. If you have small-medium size wares or flat pieces, it is very likely you can fire your projects with another class. Keep this in mind when scheduling the kiln.