

Materials List

Moist clay by Continental Clay
Low-Fire White
Low-Fire Raku

Glazes by ClayPuzzling.com
RG650 Jade Gloss
RG750 Kaleidoscope
By Mayco Colors
CC101 Transparent Crackle

Brushes & Tools by Royal & Langnickel
R6565FB-8 Aurea Fan
R2845-6 Aqualon Natural Fan

RSET-POT1 Basic Pottery Tool Set

Glass
Various fusing frit and glass scraps

Miscellaneous
Raku tongs by ClayPuzzling.com
Steel rod
U connector
Metal hook
1 inch thick wood dowel
Metal trash can
Newspaper
Bowl
Flour sack towel
Drywall or project board
Wire brush
Comet Cleanser
Old toothbrush

Contact the Artist

P.O. Box 108
Iola, WI 54945
(715) 281-6450
info@claypuzzling.com
www.claypuzzling.com



Create stunning pottery bowls using wood, glass, glazed ceramic, bisque or other forms to make a successful shape. Ceramic bisque will absorb moisture from wet clay and requires nothing between the two surfaces. Other shapes that don't absorb moisture will require a towel between the bowl and clay, so the clay does not stick. This lesson can be completed with various clay bodies. The samples shown were completed with low-fire white earthenware and low-fire raku clay on the raku shapes.

All of the bowls I've done have been pretty good size. I've done this for a couple of reasons. The first reason is because I like to make big things. The second, and most important is because the bowls need to be heavy enough so when you reach in to comb the glass inside the bowl, the bowl won't move. The glass is tacky like taffy when you reach in to manipulate it, and if the bowl is lightweight, it can slide and you'll have a hard time working it. However, if you plan to raku fire the bowls, make certain they are not too big. You need to be able to lift them with the tongs and lift them out of the kiln.

Step 1 Place a dry flour sack towel or old bath towel inside the bowl.

Step 2 Tear off pieces of clay and press them into the bowl. The harder you press, the less puzzling lines you will have in the end. If you want deep crevices, don't press very hard.

Step 3 Continue to press clay into the bowl until the entire interior is covered with a layer of clay. Run your fingers over the interior to attach all the clay parts. Use a metal rib from the tool kit to smooth the interior and level out the clay.

Step 4 The top edge of the bowl can stay rough and unfinished or you can trim it until it is smooth and level. Use a sponge from the tool kit and water to

smooth the interior.

Step 5 You can leave the bowl in this shape or you can add a top ring. If leaving, allow to dry for a day without using fans, sunlight or other ways of quickly drying. Once the shape is firm, lift the towel and clay shape from the bowl. Remove the towel and place the clay bowl on drywall of a project board to dry. Don't place it on a surface that will not allow moisture to escape on the bottom, or your shape will likely crack. Don't force dry the shapes.

Step 6 If you want to add a top, textured ring, leave the clay shape in the bowl. Pull out additional clay and flatten to about the same thickness of the bowl. This can be done in parts or as one slab. Score the top edge of the bowl and the back side of the



The plan for this bowl was originally going to be raku fired. One heavy coat of Jade Gloss Raku Glaze was applied to the exterior and wiped back so it was mainly in the crevices. A heavy coat of Jade Gloss was also applied to the top. The inside was glazed with three coats of Transparent Crackle and while the last coat was still wet, turquoise, purple and blue glass was embedded along the top edge under the top plate. Additional glass was added in the bottom of the bowl. But since the bowl was too large and difficult to lift with tongs once in the kiln, it was decided to just fire to cone 06 and comb the glass.

The exterior of this bowl was glazed with two coats of Kaleidoscope and the interior with three coats of Transparent Crackle. While the last coat was still wet, lemongrass, purple and turquoise glass were embedded in the sides and placed in the bottom and raku fired.



top parts and attach with slip. Use a wood sculpting tool After allowing to dry for a day like described in step 5, remove from bowl.

Step 7 Allow the shape to dry for a minimum of a week. It's also helpful if you can place it on top of a firing kiln for a load or two after it has dried naturally for a week. The heat from the kiln will help remove any additional moisture.

Step 8 Fire to appropriate temperature for the clay body selected. The low-fire clay and raku clay bodies used with the shapes shown were all fired to cone 04.

Step 9 Glaze shapes with colors listed with each according to instructions on product labels. Use the Aurea Fan on textured areas to work the color into crevices and the Aqualon Fan to glaze smooth interiors. When applying the last coat of glaze to the interior of the bowls, embed glass chunks along the top edge of the bowl because you will add some more glass to the bottom anyway. You only need a thin layer of glass on the bottom. Don't fill the bottom with too much glass or it can cause the shape to break after firing. Glass and ceramic clay expand and contract at different rates, so you will always get some crazing in the areas where you have glass. It really does not matter what COE of glass you use because they will all craze.

Note: Some artists prefer to cut power to the kiln when they reach into the kiln to manipulate the glass. There is always a chance of coming into contact with the elements in the kiln wall if you are not careful. Always wear raku gloves and protective clothing when working inside a hot kiln. Pull long hair back and be sure you have no loose clothing or items that could catch fire. Always be sure your surroundings are free of flammable items.

Step 10 For a traditional firing, load the bowls in the kiln (still if bottom is glazed) and fire to cone 06. Try to prop the bowl up on shelves in deeper kilns so they are near the top, making it easier to reach in and comb the glass. Don't stack too high and make certain the shelves are stable so they won't rock or tip when manipulating the glass. Leaving items down in the bottom of the kiln can make them more difficult to reach and see. When the kiln reaches around 1,700 degrees F, open the kiln using the pulley system just high enough so you can reach in and comb the glass. Make certain you have protective eye wear like welding glasses or shield (green tinted) to protect your eyes from harmful rays. If you don't have a digital kiln, wait for the kiln to turn off and rake the glass immediately. The glass is not fluid. It's more like moving taffy. Sometimes you have to close the kiln and allow the glass to heat up if the kiln cools too much. Pull several lines through the glass. Allow the kiln to turn off and cool before removing the items.

Step 11 For raku firing, dryfoot the bowls (remove any glaze from the bottoms) rather than stiling. Since these items are removed from the kiln at 1680 degrees, you don't want stilts sticking and popping off as the items are lifted. Hot stilts bouncing up off the ground can burn you or catch other items on fire. Try to prop the bowl up on shelves in deeper kilns so they are near the top, making it easier to reach in and comb the glass. Don't stack too high and make certain the shelves are stable so they won't rock or tip when manipulating the glass. Leaving items down in the bottom of the kiln can make them more difficult to reach and see.

Program the kiln to fire as quickly as possible to 1,730 degrees F and hold for 10 minutes. Program to drop to 1,680 degrees and hold for a few hours. The items can be pulled at any point when the kiln reaches this temperature. The hold is done so if you don't get to the kiln right when it reaches 1,680 it won't continue to cool. When the kiln reaches 1,730 degrees F, open the kiln using the pulley system just high enough so you can reach in and comb the glass. Make certain you have protective eye wear like welding glasses or shield (green tinted) to protect your eyes from harmful rays. If you don't have a digital kiln, wait for the kiln to turn off and rake the glass immediately. The glass is not fluid. It's more like moving taffy. Sometimes you have to close the kiln and allow the glass to heat up if the kiln cools too much. Pull several lines through the glass.

When the kiln reaches 1,680 degrees, raise the lid with the pulley and reach in with the raku tongs and lift the bowl out and place it in a metal trash can lined with 5-7 layers of newspaper, and tip and turn in the flames. Keep the item down in the can. Don't hold it above the can in the flames. Once most of the paper is ignited, set the bowl in the can with the glass side facing the bottom of the can and secure the lid. Only place one item in a can.

Allow the items to cool in the can for at least a half hour. Longer cooling times are fine. Use raku gloves when opening the can and removing bowls because



they may still be hot. Be sure to put the lids back on the trash cans because hot ashes inside can smolder and catch fire again. Use a wire brush to remove ash from ware and allow to cool to room temperature. Clean up with a cleanser like Comet and an old toothbrush. The smoke smell will go away in a couple of days.

Never place raku items in direct sunlight for extended periods because the color can fade. Raku items and shapes with glass and clay combinations are not designed to be used with food or to hold water. They are decorative only.

not often very long and it can make it difficult to comb large areas. The original large rake I created was with a wooden broom stick and a metal hook. I had to soak the stick in a bucket of water so it would be saturated and not catch fire when reaching into the kiln.

Since that original rake, I found other supplies at the hardware store. This steel rod was near the welding supplies. The metal hook is the kind you can screw into a ceiling joist. Look for the kind that comes to a point on the hook end. I found some had rounded or cut off, blunt ends, and others were pointed. I used a "U" hook that tightened around the rod and the rod and the hook to attach them. The wood handle on the other end is a large wood dowel with a hole drilled in with silicone glue keeping the two together. I found the wood handle was needed because the metal rod retained the heat and the heat could make its way up the handle making it difficult to hold.

Pulley system for lid

If you are firing with a larger kiln, you will want to hook up a pulley for raising and lowering the lid when manipulating the glass or doing raku. All of the items can be found at a hardware store. The same kind of hook used to make the glass rake is attached

to a joist in the ceiling above the kiln. A metal swivel pulley is attached to the hook and a metal cable is attached to a metal clip that wraps around the lid handle while the other end is fed through the pulley and looped at the end using a "U" clamp. Make sure the cable is not plastic coated and be sure it is long enough so a second person can safely raise and lower the lid. I also have a hook away from the kiln where I can catch the looped end of the cable if I don't have a second person to assist.



Making a glass rake

It's important to have a glass rake that can be used to reach inside the kiln to manipulate the glass. The kiln is very hot, so it needs to have a long handle and must not be flammable. Commercial rakes are available from many glass suppliers. But, the handles are