

STEVEN HILL WORKSHOP OCT. 2014

GENERAL NOTES:

- 3 mm ceramic fiber paper on n eBay from Skyline components.
 - *****- glaze mixer.com will mix and mail dry glazes you request (minimum order is about 1 lb. of dry glaze)
 - **PotteryNotes app!!
 - **buy one carbide grinder with a handle like a scrubber mad of rectangular firebrick surface. Buy at Lowe's.
 - article from Ceramics Arts Daily to read: The Faces of Iron.
 - prop open kiln at 1500 degrees as the kiln cools and it works!!!
 - Pete Pinnell, John Britt are good people to take a glaze course from.
 - it is all about layering glazes.
 - "Coleman porcelain" is good for single firing.
 - Laguna Babu porcelain is best for slip bec. It doesn't crack as easily.
 - Shake Rag near Chattanooga has summer workshops
 - Steven used slip trail only on a spiral form.
 - he uses poured slip on smooth forms only.
 - Pipenberg has a trimming disc that is helpful
 - Steven uses 2 marks on bottom rim, NOT an odd number of marks.
- HANDLES:
- his handles are about 8 inches long- they are long! With that additional length, he gets a natural curve and then attaches to the bottom of the pot.
 - trails slip on top center of the spirals: he does 2 per cup.
 - taps the trailer bulb tip on a hard surface before trailing to get air out of syringe. His slip trailing is loose and gestural.
 - he does not slip and score but he does flatten and make end CONVEX, not concave, on handle. the top part of the the handle, wet the pot, push the handle on, smoothes it and pulls again from the pot. I would add Lana Wilson's Magic Water too.

BOWL THROWING

- use hydro bats that are PLASTER bats and are wonderful for bowls . Lime popping happens if a tiny piece of plaster gets in your clay-this is bad.
- 5 lbs. of clay for medium bowl.
- wet bottom of your clay before attaching to plaster bat.
- leaves 3/4 " thickness at bottom to get a generous foot.
- start bowls in a U or V shape. The vertical V shape allows you to create a wide bowl at the end of throwing.
- alter edge outward with wet finger run along the rim irregularly. This takes time and needs a fairly thick rim to work with.
- he throws with a thick edge and triangular base shape, not round. Then he used fingers to thin rim. This process also opens the bowl more. He stretches on two ends after altering rim.
- his bowls are rather thick. He used a rib on inside and outside. He leaves a thin ridge on the rim also where he has not pulled the rim.
- then he decorates inside with slip
- he uses Babu porcelain slip by Laguna. He likes it best for slip bec. It doesn't crack when used as slip.
- use slip judiciously on bowls-just put a few dabs in bowl and use a rib to move the slip.

SLIP WORK:

- need smooth slip
- apply to wet clay if possible. You can put it on leather hard too.
- **should run off fingers like cream.**

SPOUTS:

- spout pouring tip should be horizontal with table.
- belly is most important feature of a pitcher.
- Steven does not cut his pitchers off the bat until he has attached the spout and handle.

SPRAYING

- spray back of bowl first, then inside.
- there is a Juicy Fruit with Copper for cool palette and a Juicyfruit with Iron for the warm palette.
- Frost Green isn't as runny as other glazes.
- Juicyfruit is always the last glaze Steven applies as a modifier.

ADVANTAGES OF SPRAYING:

- you can blend glazes easily with spraying
- you can also isolate colors with spraying
- you can be very precise with spraying but it takes a lot of practice. You can mask parts of the form with a piece of cardboard.
- there are no dipping lines
- spraying eliminates hard glaze lines
- spraying involves less handling of pots
- interior glaze is poured but all the spraying is done on a banding wheel
- spraying makes it easier to glaze large pieces
- you are able to work with small amounts of a glaze
- you can test new spray glazes with as little as 500 grams. In this way, you are not committing to a large amount of a glaze
- unevenness in spraying gives you some atmospheric effects
- down firing the kiln aids in crystal formation
- spray a pot until it's wet is the best guideline for getting glaze on a pot thickly enough. When the glaze forms wavy rivulets, it is getting to be too much glaze.
- Steven's glazes are runny. Build pieces with this mind; have a glaze trap sort of base.
- put soft brick under pieces so they don't stick to kiln shelves ...student suggestion. Or use clay cookies orbuyceramic fiber paper, cut about 1/2" around base of pieces, Elmer Glue them on. This is expensive but saves oil shelves while learning to use these runny glazes!
- spray more lightly near the bottom of a pot so it doesn't run.
- IMPORTANTLY: bisque to 04 and soak for 30 minutes at the top temperature.**

-DISADVANTAGES OF SPRAYING:

equipment and its maintenance, must use respirator, noisy compressor, it is difficult to judge glaze thickness on a piece, cannot do brushwork over sprayed glaze.

BASIC SPRAYING TECHNIQUE:

- called feathering
- short strokes back and forth or up and down. Trigger is off and on.
- the pot is manually turned on the banding wheel, the wheel is not spinning.
- you can also feather in a circle, moving your sprayer in a circle/oval pattern which is useful for larger pots . The trigger is constantly held down for the circular feathering.
- hold sprayer 4-8 inches from pot
- hold sprayer 2-3 inches for precision like on a handle that is a different color from vessel.

GUN:

- use the round spray pattern NOT the fan pattern. Check the side knob and "right tightly" it down to get the round pattern.
- the air controller on bottom of the gun controls the air. Atomization is what you want and you know you have it when there is soft even dots on the pot surface.
- shoot water thru gun to be sure it is working before attaching glaze cup.
- test glaze by spraying on cardboard or side of bucket before spraying piece.
- there is a quick connect at the base of the gun

GLAZE THEORY:

- be sure you plan your glazing!!
- to keep good records, be sure to number or code pots in some systematic way. Record keeping is CRITICAL.
- 5 categories of glazes used by Steven: base, modifiers, ash, borders, and liners.

- he thinks about his glaze elements as I might think about makeup!
- BASE provides unity and is always Matt. It is the foundational color that is on the majority of the pot. 60-100% of pot coverage and 60-80% of the glaze thickness. Strontium Magic Crystal Cool or Warm is always the base. Never use it alone but it is a great foundation with good crystal formation.

-ASH (creates streaking and long dramatic drips):

- always sprayed ABOVE the base and modifiers. It is not sprayed on top/over another glaze like the modifiers. It should be applied only on the top 1/3 of the pot. The streaks make the pot busier with streaks.

- 0-40% of surface.

BORDERS:

- like frames. If Steven does a border color at the top of a piece, he also does it at the bottom of the pot.

- borders are 100% of the glaze thickness where they are applied

- usually applied last.

- borders are usually black or red orange with contrast between the interior and the borders. For example, he will use black borders with an orange-red liner. (Interior of vessel)

MODIFIERS (these give color variety)

- red orange liners goes with warm base.

- white liner goes with cool base

- black liner goes with warm and cool

- Ashes: Hannah's Fake Ash (yellowish) and Copper Fake Ash is green

SAMPLE SPRAY PROTOCOL:

I would divide up a vessel into 3 parts to visualize glazing: 20% is the top where Ash goes, 50% is center of piece, 30% is bottom of piece.

- generously sponge bisque ware before spraying is rec. but I did not find it to be necessary.

1. Pour liner and wipe rim. Glaze stain left by wiping is no problem.

2. Spray base
3. Spray modifier colors around rim at top
4. Then spray red orange in center belly of piece. Red orange is very sensitive to conditions and changes accordingly.
5. Spray SH Transparent Green. It is VERY RUNNY So spray lightly. Spray over the base color and other modifiers.
6. Then Spray with Juicyfruit With Iron. This glaze enhances all the other glazes. Again, spray over the base color and other modifiers.
7. Try not to spray modifiers over ash glazes.
7. Last thing to spray are the borders: handles, foot

GLAZING TEXTURED POTS:

- stay away from streaking ash on textured surfaces
- SH Transparent Green can be dabbed into texture with a brush. Wash off the rest of the glaze on the pot's surface and then spray your glazes. The Transparent Green will stand out.
- if you spray glaze at an angle instead of straight on, you get interesting shadows in deep textured pots. Don't use ash on the pot. Use a shiny modifier angling one way and a Matt modifier angling the other way.

STEVEN's GLAZE MUG DEMONSTRATION #1

1. Poured liner by filling pot half way. Pour glaze out the whole way around the pot's rim. Wipe spills with damp sponge asap but a stain on the clay is OK. I let glaze liner sit in piece too long and it became too thick on the bottom, then bubbled when fired.
2. Showed 3 sprayers: course, fine, and in between. Fine sprayers clog easily. Cost is 3 sprayers for \$90.
3. Shoot air/water? Through gun before attaching glaze bottle. Use the glaze bottles Steven recommends. The sprayers are not available thru pottery supply sites.
4. Test spray gun. If it splatters instead of covering the test area, add air with knob on bottom of sprayer.

5. Feather spray base glaze on pot until it is wet. Glaze should NEVER be so thick that it runs.
6. You can use cardboard or paper etc. as a mask and protect parts of the pot from the spray. You can also create a hard glaze line this way. Do not use Mylar, plastic etc. As a mask Because the glaze runs right off it.
7. Base glaze first: hold and glaze around handles, feet etc. Put piece on banding wheel and spray piece til shiny wet but glaze isn't forming rivulets.
8. Let it surface dry. Add Hannah's Fake Ash, following spiral.
9. Then Red orange over most of pot, especially center of piece. Cleans with a sponge around bottom rim and added more red to bottom.
10. Transparent green over slip trailing.
9. Spray whole ext. with Juicyfruit warm
10. Finally, Overspray rim with liner color at top of piece. I learned to be careful so as not to get too much liner glaze inside vessel: it will blister on the bottom.
11. When it is dry enough, sponge bottom of pot and you're done!

STEVEN'S GLAZE DEMONSTRATION #2

Pay Attention to how you angle the gun: shoot up to do top third of pot. Shoot across and slightly down to re-glaze top rim/ liner. Aim 1 inch away from base of pot and angle down for bottom border.

2. If you are going to glaze inside a foot ring, do it first by glazing around outside of ring and then inside.
3. Ceramic fiber paper is glued to bottom to protect kiln shelf.

GLAZE DEMO #3: cool palette

-ok if liner glaze is in the pot a little longer than " in and pour out" but be careful! My liners bubbled too often bec. They were too thick in the bottom.
- ok to wipe glaze with wet sponge from greenware after applying liner. Do not have to wipe all drips off completely
-Coleman porcelain has strong plasticizer in it. Have to scrape it out of buckets during cleanup.

1. spray under handle with scm cool.

2. Use short strikes and come UP the pot.
With hairline crack, dip tool in water and pack along the edge. Can also spray a little trans. Green at top of crack and hope it runs down the crack and fuses.
3. Using copper Ash, spray up at top 1/3 of pot. He also goes down the valley of the spiral with a lighter application of the ash glaze for continuity.
4. Then Frost Green over bottom half.
5. Add a little more trans. Green to light colored pots bec. Of lovely crystallizing. he also puts a little trans. Green inside pot.
6. Used sponge to remove glaze from foot and then sprays foot with satin white and around rim again.
7. Finally, a thin coat of Juicy fruit copper across the pot but he seemed to miss the ash area at top rim when using juicy fruit.

PITCHER GLAZE DEMO #4: warm palette

- base in center of pitcher
- then Hannah's fake copper ash under spout and then bottom 1/3 of pitcher
- Next is red orange over top half of pitcher. By itself, red orange makes beautiful crystals.
- trans. Green along edge of middle slip on pitcher. It does take away from the rich Tuscan warm palette.
- sponge foot clean of glaze and spray frost black on foot. Black does not run badly. On spout and top rim and handle, he sprays 3-4 inches from handle, spout etc. And spray close, aim up and away.
- ends with light to medium coat of Juicyfruit with copper on top 2/3 of pot
- clean foot and done!

GLAZE NOTES

- you can use these glazes on dark clays AND I thought the warm palette was nice on speckled brown; it gave a satin finish.
- Hannah's Fake Ash over the warm base turns mat yellow
- the black Matt will move like an ash
- red orange is unpredictable and also forms crystals.

-forms with raised dots in cool palette. I put tiny black dot of glaze on each polka dot and it ran beautifully on the frost green!

-1%=100 grams

-500-1000 grams of a glaze is enough to test on many pots.

- John Britt has a new cone 6 glaze book coming out.

-we fired to cone 7 this week. Add cones to top and bottom shelf. He used the,6, 7,8 cones in each load. Buy big Orton cones.

FIRING SCHEDULE:

-cooling is the important part, and the soaks.

-youtube may have vid on an cooling an Evenheat

-*****"the Many Faces of Iron" article in Ceramics Arts Daily is excellent.

Article has photos of different cooling cycles. Look this up for Bob.

- plug all peep holes to fire

- with a vent on kiln makes the firing better

- 6 hour cooling cycle between 1700 and 1500 degrees is where the magic happens! Without cooling cycle, your spray pattern is always visible and micro crystals do not form easily.

- Fluke brand thermocoupler should be replaced every year.

- iron crystals grow readily.

- buy self supporting cones or a fired cone holder.

- bisque to 04 and soak 30 minutes at top temp.

SPRAY EQUIPMENT:

-spray guns need stainless steel interior because of the silica in the glaze.

They will wear out with glaze no matter what. Buy TCP BRAND. you can use the cup liners for a long time. Buy theDevilbliss cups. Steven LOVES Devilbiss Dekups cup system. The adapter that goes on the gun youse the cups is required.

-the TCP large guns in their set are the same as the large ones we used in the workshop. The detail gun in the set is the small one we used at Arrowmont.

- the disposable masks with filters can be bought online for about \$2 each.

- air hose needs to be light weight for easier glazing.
- need one high quality quick connect brass coupler that is female (for your hose) and male cheap couplers, one male per cup. Can buy the quick connects from the place where you buy the hose.
- the compressor needs to be at least 1 HP. You should drain the compressor valve every time you use it.
- you can add a water filter to your compressor. You do NOT want an oiler on compressor.
- you need 50 PSI set on your compressor
- you do not want water to get in your hose.

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HOW TO CLEAN SPRAY GUN AND CUPS:

- remove cups, empty back into glaze buckets, rinse out cups and liners and dry upside down. Liners can be reused for a year.
- with a bucket of clean warm water, place gun opening, where glaze cup sat, into water and blow clean water through it. Put a finger over nozzle and keep tapping while blowing water through the gun to backwash interior. Then fill an enema bulb with warm water, fit it into the gun opening and blow that water through it. Repeat until clean. Use a small spiral stiff brush to clean inside opening and around nozzle. When done, detach from air hose and let dry.

QUESTIONS:

1. Protocol for preparing to glaze: sanding cleaning, vacuuming, dampening etc. Answer: "Clean bisque" burns out impurities in the clay. Stacking too many bisque pieces will not allow for full oxidation of the organic materials in the clay. I did nothing special to my bisque pieces, did not even dust them off and they worked fine.

2. Can you talk a little bit about creating opacifiers and matt glazes? (opacifiers=An **opacifier** is a substance added to a material in order to make the ensuing system **opaque** which means not transparent and not translucent. Examples are **tin dioxide** (SnO₂) and bone ash.)

3. In general, are kiln "hold" times necessary? How do you calculate them?
Answer: he couldn't answer that. His hold times are there because they were effective in his reduction firings.

4. Copyright on your recipes? For example, if someone in my pottery guild would like me to share your recipes, would you bless that request? I know your recipes are out on the web, but that does not mean their open availability has your consent. ANSWER: we are allowed to share.

7. How to adjust spray gun pattern. answer: knob on side of spray gun needs tightened down completely.

8. Food safeness of these glazes we are using . Answer: most glazes are not dangerous. Steven thinks the issue is overblown. High silica glazes with little flux are very food safe but ugly. Do not worry about leaching , crazing, or pinholes as potential bacteria havens. Use vessels responsibly which means use them and wash them do not let OJ sit for hours in a glazed cup.common sense.

10. Do you feel there is any diff. In your final glaze results between pieces that were single fired vs. bisque fired before glazing? ANSWER: no, just faster to single fire

10. I assume you fired bisque and greenware tog. This week . Did you follow the greenware or the bisque firing schedule? Answer: greenware schedule

CLEANING EQUIPMENT

-take glaze cup off gun, put gun in warm clean water and blow air through it. Keep putting fingers over holes to back flush. Also fill gun with water from a big enema bulb to wash out.

- wash out cups and dry upside down. Can reuse extra glaze.

MY RESULTS:

- NO BLACK LINERS- do not like black liners!!! Runs on outside with long black feathery marks. Dull inside vessel.
- black tends to run at base. Be careful.
- warm palette is beautiful over brown speckled clay!! The cool colors seem to get shiny on brown speckled so not crazy about them.
- Cupcake cup with raised dots in cool palette. I put tiny black dot of glaze on each polka dot and it ran beautifully!

REC. EXPERIMENTS AT HOME:

- take 8 home glazes and test them as bases and as modifiers. Divide 8 pots into 8 sections each 2" wide with a wide glaze trough at base of test vessel. Leave one space with just base on it and then try 7 modifiers on each of the other 7 spaces.

Be sure to mark each piece on the bottom with all the glazes used.

Vessels should be 4-6" tall.

Spray a little heavier at top.

#2 EXPERIMENT:

Start with SCM bases and try 7 of my favorite commercial glazes.

- bases are always matt and have some crystal forming properties. Zinc oxide, titanium dioxide, strontium and barium???