

QUAIL CREEK POTTERY & SCULPTURE CLUB



NEW MEMBER TRAINING

Orientation to the
Studio
Basic Clay Handling
Basic Tools
Introduction to Hand
Building
Class Project
Instructions

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INTRODUCTION

This is a Club built on volunteer efforts and member participation. We introduce New Members to the fundamentals of working with clay. This includes various methods of construction, glazing techniques, and preparation of pieces for the kiln. These are Orientation classes that give you the tools to grow your pottery experience.

This is not an all-inclusive training, and we are not a Pottery training school. We encourage new members to take advantage of Google, You-Tube, Ceramic's Arts Network, and Pinterest, which have a wealth of information and ideas. We have a Club Library and members who like to share their skills and ideas. Start an ideas file with pictures of pieces you might like to create. Remember, your success and enjoyment are directly proportional to how much you put into discovering all the online resources for learning available to you.

While clay is incredibly versatile, allowing broad possibilities from functional to whimsical, it is important to remember that following the basic rules helps guarantee a positive outcome. The basic premise in our studio is that ***"nothing is guaranteed;"*** there can be many slips and pitfalls throughout the whole process. Enjoy the journey!

STUDIO USE

The Pottery Club shares this facility with Ceramics. We are two distinctly different clubs and while we share the space, we do not share equipment or supplies. Be respectful of anything belonging to Ceramics and leave the studio as clean as it was when you entered.

1. Pottery Hours are posted at the front door. They are **Mon-Wed-Fri 1:00pm-5pm, and Tue-Thur. 8am-12 noon**. The other hours belong to Ceramics, and ***we are not allowed to enter the studio during their hours***. There are currently 22 workspaces and 3 wheels available for use each shift 1st come, 1st served, except for the wheels which are reserved. Once the studio is full a sign will be posted on the door.
2. **Sign In:** All Members must sign in. The register is next to the entry door. You do not need to sign out. Please read all notices posted by the Register book.
3. **Task Sticks:** There is a jar of **To-Do** chores near the sign-in register. You must pick a chore every time you come into the studio to work. These tasks take less than 10 minutes and spread the work of keeping the studio clean over all the members. Perform your task at the beginning of your shift and return the stick to the **Done Jar** sitting on the Monitor's table. Ask Monitor for help if unsure of the task.
4. There must be a Monitor in place anytime members are using the studio. These Monitors are trained in Studio use, equipment use, and basic clay handling. They are not instructors and may or may not be able to answer all technical Pottery questions.
5. We expect all our members using the studio to be respectful of the other potters, to be considerate of our shared space and equipment, not to handle anyone else's pottery pieces

on the shelves, and most importantly, clean and return all club supplies and equipment to the exact place you got it from! Our tool bins are numbered, all items in a particular bin are also numbered. Check these numbers when returning tools.

WORKSPACE SET-UP

- Canvas work board
- Tool Set
- Tool washing bucket with soapy water
- Plastic Container for clay scraps
- Plastic water container
- Spray Bottle
- Clay Slip
- Cornstarch and brush
- Micro Cloth. We clean workspaces with these cloths, no sponges or paper towels as they just smear the clay dust.
- Plastic drying wraps_
- Saran Wrap
- Ware boards
- Work Slips /pen
- Rolling Pin

Basic Clay Characteristics and Handling

Clay characteristics often depend upon its “Dryness”. This is characterized as:

1. **Wet.** Very soft-sticky. Hard to hold a shape or cut. Good for extruders.
2. **Soft.** Smooth and soft, easy to form into balls and work into shapes.
3. **Medium Leather hard.** Pieces are firm, can stand on their own, are easy to carve but do not crack when bent.
4. **Leather hard.** Pieces are stiff, will not bend without cracking. Trimming stage.
5. **Green ware.** Completed pieces, fully dried but not yet fired at all. **Very Fragile!**
6. **Bisque ware.** Greenware that has been low fired (Cone 04/05).
7. **Glaze ware.** Finished product, has been fired to Cone 5, both the glaze and clay are now vitrified.

Shrinkage

Clay is full of moisture. Every clay body used in Pottery has a known Shrinkage Rate. This rate is used to calculate your final piece size. Shrinkage happens at every stage of the construction process, the piece shrinks as it dries. If the piece is not all the same thickness different areas will shrink at different rates. If care is not taken to dry slowly this can cause stress cracks, warpage, or attachments falling off. All the clay used in our studio has a **12-13% shrinkage rate.**

Wedging

New clay in its original block/bag has no air pockets. Recycled or reconstituted clay may have air pockets. These air pockets are problematic when the piece is fired as steam forms in the holes and can cause the piece to explode. Wedging is similar to kneading bread, except in bread we are adding air, but in clay we are removing air. We push and compress the clay to remove any air pockets.

Pottery Studio Clays

All clay used in the studio must be purchased from the Club. Our clays are matched to our glazes and our kiln firings. To simplify our member charges, we include the cost of glazing and firing in our clay costs. You purchase the clay from the Studio Monitor, cash or check only.

We use “Cone 5” clays. “Cone” is a pottery term for the temperature required to vitrify our type of clay during glaze firing.

Clays need to be kept moist during storage. Remember to spritz some water onto your block before storing it. Dry clay can be reconstituted with water. We cut our working clay off the slab with a wire cutter. The club supplies slip (liquid clay) for each type of clay used. Slip should be the consistency of liquid whipping cream. If the container slip is too thick, add water and stir until correct. Slip that is too thick will not make a good attachment and it may fail in firing.

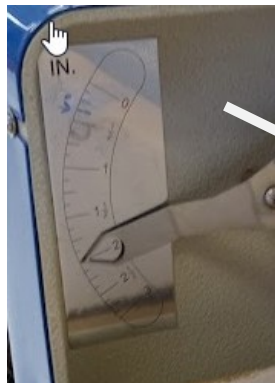
Slab Roller

The Slab roller is used to roll out an even thickness clay slab. **Always place your personal canvases between the heavy protective canvas.** The clay slab must be soft and not more than 3" thick, you can pound down the slab chunk with a mallet to make it thinner. Pound the clay on the Granite Counter near the sink.

When lowering the roller with the small upper wheel, make small adjustments, usually $\frac{1}{2}$ in. on the gauge, **do not try to roll thick slices**, it's too hard on the mechanism. Every few turns, stop and rotate and flip your slab. This helps to prevent warpage later in the process. The final thickness should be between 0.25"- 0.35". We usually aim for the inked line on the indicator. Slabs can also be rolled out with a rolling pin and wooden slat guides.



Your canvas's sandwiched between the clubs heavy protective canvas.



Transfer the slab to your work space. Try not to fold or bend it as the clay has "*muscle memory*" and may return to a warped shape later in the building process.

Preparing the slab

Clay has a memory, the clay platelets in the slab need to be compressed and aligned to reduce warping. We prepare the slab by **compressing** it horizontally and vertically, both sides, with a rib to smooth out the surfaces and align the platelets.

Decorate or Texture

Use a Texture Tool (Mat, Stencil or Roller) to embed a design into the slab. With a Mat, or Transparency Sheet, use a wooden Rolling pin to transfer the design.

Score and Slip

When attaching 2 pieces of clay together or are adding an attachment, you must always **Score and Slip** the 2 abutting edges. **Slip** is the glue that holds the pieces together. Slip is just liquid clay. Slip is made from the same clay as your piece, (same shrinkage rate) mixed with water to the consistency of heavy cream.

Scoring is roughing up the surface of the attachment edges so that the **slip** can seep into the pieces. You can score with a Serrated rib, a fork, your pin tool, a wire brush etc.

Attachments

All attachments **MUST** be the same dryness as the piece they are attaching to. Attaching wet clay to dry clay is a recipe for failure, The shrinkage will be different from both pieces potentially causing cracks or failed adhesion.

“Feet” on the bottom of your piece raise your piece off the kiln shelf and make for easier glazing. Feet can be rings, coils, cookie cutter shapes, balls etc.

Trimming

Once your piece is fully constructed and leather hard it needs to be trimmed and cleaned up. Use damp fingers, a sponge, a rib, a chamois etc. to smooth out all the sharp edges and rough spots. If you do not do this before Bisque Firing, you will have to use a file or Dremel on your bisque fired piece, which is a real chore! **Sharp edges can turn into razors during glazing.**

Note: This can also be done when dry at the greenware stage before going to the bisque firing. Be very careful, your piece is extra fragile at this stage and can easily be broken.

Repairing cracks in greenware has limited success. You can wet down the crack area to get back to medium soft and fill it with magic slip (clay slip with fiber). **Shrinkage** again raises its ugly head, your repair will shrink at a different rate than the surrounding clay and it is possible it will reopen during firing.

The thickness of your slab may also affect the outcome. Too thin or too thick are problematic for cracks and warping. We recommend a minimum of ¼”, maximum ½”. We do not accept pieces for the kiln that have walls over 1” thick. The larger the slab the higher the likelihood for warpage and cracks.

Worksheets

Every pottery piece you make must have a **WORKSHEET** attached to it when it is placed on the communal shelves. Be sure your name, initials or stamp is on the bottom of the piece. After the initial 2-3 days tightly wrapped drying phase, you loosen the plastic for another 2-3 days, then remove the plastic so air can fully get to it. Note this date on the Worksheet as: **Date Uncovered. This is the date used by the Kiln Assistants to check for proper dryness.** By the time your piece makes it to the Kiln Holding Shelves all dates must be filled in. There are 2 colors of Worksheets, White: Glaze/Mid Fire (Cone 5/6) Green: Bisque/Low Fire (Cone 05/04) for Underglazes and Stroke and Coat glazes.

White Worksheets are for pieces designed to eventually go to Glaze Cone 5 Firing, what we refer to as "Mid Fire." All pieces must first go to the Low Fire Bisque Shelves when dry. When they come out of the kiln you must retrieve your worksheet from the container labelled "Bisque" and fill it in with your Glaze information.

Green Worksheets are for pieces designed to stay at Low Fire cone 04/05 through the whole process. Low Fire can be used only with underglazes and stroke & coat glazes to optimize bright colors. These pieces go on the Bisque low fire Shelves. Note: if you use speckled buff clay, the speckles will not show using low fire only. These shelves have **Green Signs.**

Understanding the Drying Process

Every piece has a unique drying profile. Thickness, attachments, type of clay affect the drying cycle.

1. Cover fresh pieces with plastic to slow down the initial drying and allow all the attachments to shrink evenly. **2-3 days**. Only use the plastic provided by the club!
2. Leave your piece lightly covered for another **2-3 days**. Our Drying Shelves are under air conditioning vents which create cold air currents which may unevenly dry your pieces.
3. Uncover completely to let dry to bisque firing stage. **3 -14 days**. The date you do this step gets noted on your Worksheet as the date uncovered. Any supports and anti-warpage tools you have used are removed at this point.
4. Sculptures require more drying time as they have widely different thicknesses and size. Some larger sculpture may require up to 30 days to dry.
5. Pieces dry enough to go on the Low Fire Bisque kiln shelves should feel warm to the touch. Hold up to your cheek to test. The color of the clay will have lightened as well. If in doubt, ask the Monitor or kiln assistant.
6. Trapped moisture within the piece will turn to steam (expand) and potentially blow up the piece. This will not only damage your piece, but flying clay may damage other pieces around it.

This mess of shards was
once a beautiful owl.

Cookies and Kiln Furniture Protecting our Kilns

From the 1st step in your design, you should be considering how the bottom of your piece is going to be finished. The rule of this club is “**Bare Bottoms are Best**”. Any glaze on the bottom of a piece will melt onto the kiln shelf and affix your piece to the shelf. It will have to be chipped off the shelf.

This could damage the piece and the expensive kiln shelf! The same is true of glaze running off the sides of the piece onto the shelves. This can happen by applying too thick a coat of glaze, putting glaze too close to the bottom, or applying a glaze that is a “Runner”. **We recommend leaving a ¼” unglazed gap** at the bottom edge of a piece where running may be an issue.

“**Cookies**” are Bisque Fired rounds of clay in various sizes that you attach to a bare, unglazed area on the bottom of your piece. This cookie raises your piece off the shelf. We recommend attaching the cookie with wax so that the Kiln handler can replace the cookie if incorrect. The club also has a limited supply of stilts, bead racks, and wire rests for unique situations. These items cannot touch any glazed areas, the purpose is to lift your piece up off the kiln shelf. Your Glaze Class will address this.



Trapped Air Orb Class Project

1. Take your clay block and turn it into a ball.
2. Take the ball and, using your fettling knife, cut it in half.
3. Make a pinch pot. SEE BELOW.
4. Repeat for other half of the clay.
5. Score and slip the two halves at the rims.
6. Place the two rims together to form an orb forming a seam
7. Score and slip a thin coil around the seam and smooth it down using your fingers, wooden tool or a soft rib.
8. You now have an orb filled with air.
9. You can shape it as you would like.
10. Set it aside to dry a bit while we do the planter as we will come back to it later to decorate.

Pinch Pot



Make a clay ball

Pinch center hole

Keep pinching

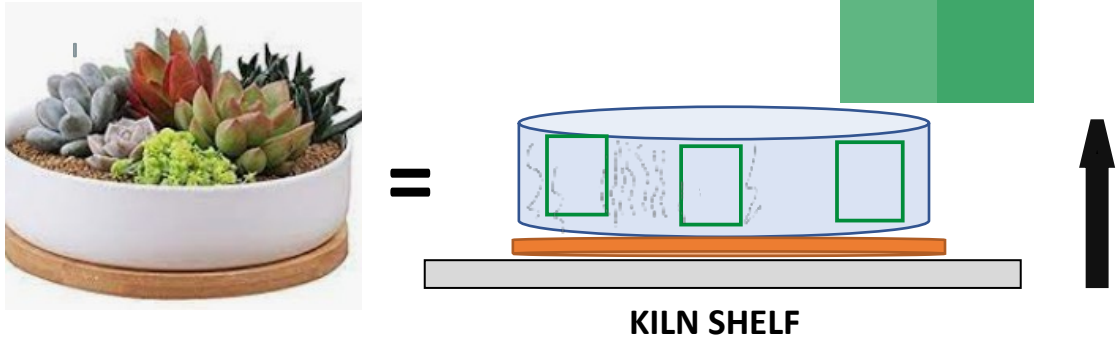


Pinch and pull up in a circular motion to form circular base pot

Planter Class Project

Designing Your Project from the Bottom Up

1. Have a picture of your project idea. Pinterest, Google, Magazine, drawing etc. Make any design changes you want.



2. Break your design into its basic building blocks. Work from bottom up

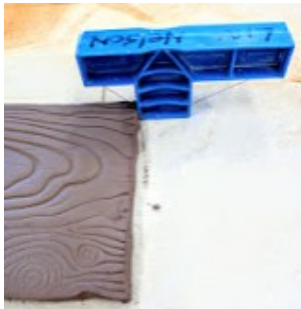
- Base: **What is going on the bottom to protect the kiln shelf?**
- Bare Bottom, Cookie, Foot ?
- Does it need a water hole?
- Walls: How Thick (3/8"). How Long (22") How Wide (4")
- Seams: Beveled? Overlapped? Abutted?
- **Texture/Decorations:** Rollers, Mats, Cookie Cutter designs, Silicon Molds etc.

Instructions

1. Roll out a rectangular slab that your foam Template (14"x 6") will fit on to, 0.35" thick
2. Transfer the slab to your ware board. Use a hard rib to compress the slab.
3. Texture your slab with texture rollers, balls, lace, rubber mats etc. A textured surface provides interest to the piece and encourages our glazes to "break". Brush with cornstarch to prevent the clay from sticking to the tool.
4. Use the Template and your Pin Tool to cut out the horizontal Slab.



5. Use your Bevel Wire cutter to cut a 45 degree beveled edge on each end of the slab, one on the topside, flip the slab over, and cut the opposite edge on the backside.



Front side



Flip over the slab

Back side

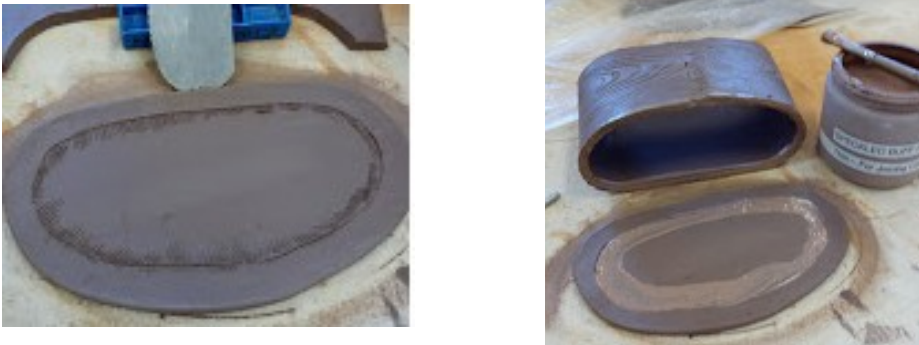


6. Score the beveled edges with your Serrated Rib. Brush on the slip. Fold the slab into the desired oval shape of the planter. Gently overlap and press together the scored edges to form a seam, being careful not to mess up your texture. Use a wood hand tool or rib to smooth the inside seam. Smooth the outside seam, left and right motions, so that you no longer see the seam. This insures a tight seal.

7. Place your planter on your excess slab. The Base is designed to stick out about $\frac{1}{4}$ " under the pot. This will provide a drip guard if the glaze runs down the sides. Using your Pin Tool, carefully draw a circle about $\frac{1}{4}$ " away from the outside the edge of the pot. Make 3 reference marks on the pot and base so you can replace pot to exact same location later. Remove the pot and cut out the circle with your Pin Tool. Smooth the outer edges with a piece of plastic or a sponge to get a rounded edge. Turn it over and engrave your initials on the bottom with your pin tool.



8. Place your Planter back onto this base, recentering it to the reference lines. Draw a circle tightly around the outside edge and inside of the pot with your pin tool. This creates the guide lines for brushing on the slip.
9. Remove the planter from the base. Score the two pieces; score the ring you now have on the base as the bottom edge of the planter. Brush slip generously on the scored pieces and carefully place your pot on base using the reference lines. Wiggle it a bit to ensure it is well adhered.



10. Roll out a thin coil. Reinforce the bottom inside seam with a coil. Slip both the inside bottom seam and the coil and place the coil inside where the pot meets the base. Use a wooden tool to "smush" the coil into the crack. The coil must be spread both up the side of the planter and over the bottom edge of the base. Work the clay into the bottom edge with the wooden tool or your fingers and sponge until all is smooth.



11. Select a cookie cutter, stamp, or silicone press mold (use soft clay for press mold). Use Saran Wrap or Cornstarch to stop the cutter from sticking. Smooth/round the edge with cloth or sponge if rough or sharp. Lightly hold the form on the piece and draw an outline around it. Score and slip both the appliqué and the side of the planter and attach the decorations. Be sure that the attachment is tight, no air.
12. If the piece is a Planter, cut water holes in the base. Clean up all the edges with fingers or sponge, remove any spurs or sharp pieces. Smooth out the top rim, remove any fingernail divots. Doing this now saves you a lot of work. If a piece comes out of bisque firing with sharp edges you will need to file or Dremel off these edges, not a fun job!
13. Complete your Work Sheet. Place your piece on a ware board, cover tightly with plastic, and put on the appropriately sized drying shelf with your worksheet attached using a clothespin with your name on it.
14. Dry your piece on the drying shelves. Tightly covered with plastic for 3-5 days. Loosely covered with plastic for another 2-3 days. Totally uncover your piece and update your worksheet with this new date. Dry for another 3-5 days until warm to the touch. Piece must be ready for the Bisque Kiln 7 days prior to your Glaze class.
15. Place on the Bisque Firing Shelves (Green signs) with your worksheet. Place it directly on the appropriately sized shelf. Clean your ware board (all 6 sides) and return it to the wheel room shelves.

C JP

- Wash your tools with sponge or cloth. Lay them out to dry on a paper towel.
- After washing, return all studio tools to their Numbered Bin. If you do not know where they go, ask the monitor. Please do not guess!
- Take your large items to the sink to wash, use the sprayer on the ware boards. Remember to wash the top, bottom and all four edges of the boards.
- Return any plastic containers to the upper left cupboard. Nothing is to be left in the drying rack!
- Return the Slip, Cornstarch, Boards, forms etc. to their storage bins/sites.
- Wipe your workspace with a sponge to get off all the big chunks. Then re-wipe using your micro cloth. Do not use sponges or paper towels for your final wipedown, these leave clay smear marks that you cannot see while the table is wet.
- Wipe your chair: arms-back-seat.
- Check the floor. If dirty, we have brooms in kiln alley near the door. If you spilled slip, use the micro cloth mop from beside the wet cabinet in the wheel room. Clean the mop when finished with the plastic rake attached to the mop. You can also remove the cloth and rinse it well and then reattach it.

