



Claywork Glossary

Bisque – clay that has been fired to high enough temperature to remove all the moisture and convert the clay to ceramic.

Bone dry – clay dried to where there is no visible moisture and no dampness to touch. It is ready to be fired

Candling – a step including in a kiln firing schedule when clay is fired slowly to above the boiling temperature of water to steam any moisture in clay to prevent from cracking or exploding during the kiln firing.

Ceramics – objects that have been fired to a high enough temperature to create a chemical change in the clay.

Clay Memory – the propensity of clay to return a previously formed shape as it dries.

Coiled Pottery - Long strands of clay are laid on top of each other and joined through blending coil to coil. Coil pieces can be almost any shape or size.

Cracking – can occur from thermal shock the same as glass when the clay is not heated uniformly. The same as with glass, this is most likely to happen when either the clay has been cooled too fast or it have variable thickness.

Crackle glaze - Minute decorative cracks in the glaze that are often accentuated by rubbed-in coloring material.

Crawling - where the molten glaze withdraws into 'islands' leaving bare clay patches.

Crazing – Cracks caused by the glaze being under too much tension and incompatible.

Cones – slender pyramids of ceramics material made in a graded series to melt and indicate when a firing is nearly completed or completed. In an automatic cutoff kiln, they trip a switch when they melt to cut the kiln off.

Damp Box – a container used to store clay components in to keep it moist and prevent drying. Usually containing a layer of plaster that is kept moist.

Deflocculant – materials added to liquid clay to hold any dry material added in suspension and not separate or form clumps.

Dry footing - Glaze is removed from the bottom of a piece before firing, making stiling unnecessary.

Dunting - cracking caused by the kiln cooling too fast. Usually appears as simple hairline cracks, but ware can sometimes fracture into pieces.



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Earthenware – A low-fire clay. Porous and not waterproof. To be functional, It must be glazed.

Elements - Coils of high temperature resistance wire that convert electricity to heat.

Engobe - A white or colored thin layer of clay used to decorate a bisque pot. It may or may not be glazed over.

Evenivity – I term invented to refer to the almost universal need for even everything. Even speed and pressure for cutting glass, even thickness in molds, even heat distribution in kilns, even texture in clay and even drying speed in clay.

Firing - Clay is hardened by heating it to a high temperature, fusing the clay particles. Primitive pottery is usually fired on the ground or in pits with whatever flammable material is available. Kilns allow a more efficient use of materials and more control over the atmosphere during a firing. The two basic atmospheres, oxidation and reduction, affect the color of the final piece.

Glaze – a vitreous (glasslike) material added to clay to create a glasslike surface. It can be colored or clear.

Greenware – clay that has been formed to a desired shape and allowed to dry ready to fire in a kiln. Also called raw-ware.

Grog – clay that has been fired and ground up or broken up. It is added to raw clay to reduce the amount the clays shrinks as it dries.

Handbuilding – the term used to handshape or sculpt clay – as opposed to throwing it on a wheel.

Heatwork – the combined effect of time and temperature. Increasing either time or temperature will increase the effect on the clay or glaze. There is an almost perfect relationship between time and temperature wherein every extra minute of time will produce the same amount of heatwork as 1°F higher temperature.

Incised - Decorations surface designs cut into the clay. Mishima (inlaid clay) -variation - contrasting colored slip is inlaid into incised lines. This can be done using wax resist - incising then applying slip. OR slip may be applied to incised lines and sanded off the raised body.

Kiln - The furnace in which ceramics are fired. Kilns can be electric, natural gas, wood, coal, fuel oil or propane

Kiln Controller – an electronic device that allows the user to regulate the rate of heating (and cooling) as well as the final kiln temperature or cone.

Kiln Posts – Thick posts used to hold shelves in a kiln – also called shelf supports.



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Kiln Shelves - The shelves inside a kiln that ceramic greenware is stacked on in the kiln. The shelves must be coated with kiln wash to prevent glazed pottery from sticking to the shelf.

Kiln Wash - A mixture of china clay and flint in water solution used to coat kiln shelves to protect them from dripping glaze.

Leather – clay partially dried to a stage suitable to be carved or molded.

Leather Hard - A damp condition of the clay when it is too firm to bend yet soft enough to be carved. Plastic stage - clay is easily manipulated and bent. Bone dry stage - No visible moisture - no dampness to touch - Clay is ready to be fired

Matte glaze - Dull-surfaced glazes, lusterless and non shiny.

Maturing Point - Time and temperature needed to completely fire a glaze or clay object to the "vitrified" state.

Oxidation - (Compare to Reduction) A firing atmosphere with ample oxygen. An electric kiln always gives an oxidizing fire. In a wood or gas firing, the mixture of fuel and air is perfectly adjusted to give a clean burn.

Oxides - Metal oxides can be mixed with water and applied to the surface of clay. By varying the amount of material applied and rubbed off, the potter can achieve effects similar to stained wood. The most common stain is iron oxide (rust).

Paper Clay – clay that has had shredded paper or cellulose fibers added to it to reduce shrinkage while drying.

Pinch Pots - Starting with a ball of clay the potter opens a hole into the ball and forms a bowl shape through a combination of stroking and pinching the clay. Many coil-built pieces are constructed on top of a pinched bottom.

Plucking – when small fragments chip away off the base of a ceramic vessel because the piece stuck to the kiln shelf during firing.

Porcelain – high temperature clay made by combining kaolin (a pure white primary clay), silica and feldspar. It can be worked like clay but when properly fired becomes similar to glass.

Pyrometer - Instrument used to record the exact temperature of the kiln.

Pyrometric Cones - slender pyramids of ceramics material made in a graded series to melt and indicate when a firing is nearly completed or completed. In an automatic cutoff kiln, they trip a switch when they melt to cut the kiln off.



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Raku - Pottery is fired normally but removed when it is red hot and the glaze is molten. It is then usually placed in a bed of combustible materials and covered, creating intense reduction resulting in irregular surfaces and colors.

Reduction - (Compare to Oxidation) Reducing the amount of oxygen in the kiln draws out the oxygen in the material being fired. That will change the color of the glaze being fired.

Sgraffito - This comes the Italian word meaning "scratched through" and is done by incising or cutting a design through a colored slip coating to reveal the clay body.

Shivering - is when flakes of glaze peel, crack, flake or chip off edges of ceramic ware. Sometimes the pieces of glaze or underglaze are small and razor-sharp. This happens when the glaze and clay are incompatible and expand and contract at different rates.

Shelf Supports - Thick posts used to hold shelves in a kiln.

Short clay – clay that is short on plasticity and thus more likely to crack while drying.

Shrinkage – the propensity of clay to shrink as it dries. Different kinds of clay have different rates of shrinkage.

Slab – a piece of clay that has been rolled out flat.

Slip - A fine, liquid form of clay applied to the surface of a vessel prior to firing. Slip fills in pores and gives uniform color.

Slipcasting – pouring liquid clay into plaster molds to create specific shapes.

Slab Built - Clay slabs are cut to shape and joined together using scoring and wet clay called slip. Slabs can be draped over or into forms, rolled around cylinders or built up into geometric forms. Large forms are difficult because of stresses on the seams and because the slab naturally sags. Some potters get around this by working fibers into the clay body. The fibers burn out during the firing, leaving a network of tiny holes.

Slaking – the practice of sifting powder onto water and allowing it to slowly sink into the water and absorb the water.

Soaking – holding at top temperature to allow more heatwork to the clay.

Stack and Slam – a clay wedging technique where the clay is lifted and slammed down on a flat surface to smooth it out and squeeze out any air trapped in the clay

Stilts - small supports used when firing glazed ceramics to stop the melting glaze from fusing them to each other or the kiln. Stilts are a form of kiln furniture.



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Stoneware – a mid to high temperature clay that when fired is waterproof even without glaze. It is sturdier than earthenware.

Terra cotta - a brownish-orange earthenware clay body commonly used for ceramic sculpture

Thermocouple - a component of the kiln used to read the temperature within the kiln chamber. The kiln controller uses the information it receives from the thermocouple and makes decisions on whether or not to turn the element on or off.

Throwing – manually forming clay while it rotates on a wheel.

Underglazes - Liquid clay slip that contains coloring oxides and chemicals used to apply color and designs to a ceramic piece.

Vinegar Bonding - applying vinegar will create stronger bonds when attaching pieces of clay together. Vinegar is an acid while clay is a base. When vinegar is applied, the acid breaks down the molecular bonds in the clay to create water. As the water dries out the connected clay forms stronger bonds.

Vitrify - A glassy, non-porous state caused by heat or fusion.

Warping – caused when clay moves to return to its original shape as it dries.

Wedging – Rolling and pressing clay to remove air bubbles. Wedging makes the clay more pliable, ensures a uniform consistency, and removes air pockets as well as small hard spots in the clay before you use or reuse the clay for a project.

Wheel thrown - A piece of clay is placed on a potter's wheel head which spins. The clay is shaped by compression while it is in motion. Often the potter will use several thrown shapes together to form one piece (a teapot can be constructed from three or four thrown forms).