Name _____

CERAMIC TERMS & INFORMATION

Ceramics 1 & 2
Waverly-Shell Rock Sr. High School
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Bat: A disk or slab of plaster, wood or plastic on which pottery is formed or dried.

Bisque: Pottery that has been fired but not yet glazed.

Bone dry: Unfired clay that is free of water and ready to fire.

Burnishing: Rubbing moist or leather hard clay with a smooth pebble, wooden stick or steel tool to polish the surface.

Calipers: A device for measuring the dimensions of objects.

Ceramic: Clay products that have been fired for permanence.

Ceramics: The art of making things from fired clay.

China: Translucent ware fired at 2,230^{o}F; porcelain.

Clay: Fine grained earthy materials formed by the decomposition of feldspar, a granite type rock. When combined with water, is plastic enough to be shaped and when dried and fired, become a rock-like state. Pure clay is $Al_2O_3*2S_1O_2*2H_2O$.

Coiling: A method of creating pots by building bottom and walls with even, rope like coils.

Cones: Tall, slender pyramids made of clay and glaze constituents which bend or melt at a given temperature in a kiln.

Crawling: A glazing defect caused by grease, dust or oxides from handling or firing on bisque that repels the glaze.

Drying: Clay when drying shrinks up to 5-10%. Shrinkage is related to the grain size of the clay. Objects should be dried slowly and evenly to avoid warping, cracking or deformation.

Dry Footing: To clean the bottom of a glazed piece before firing.

Dusting: Applying glaze to pottery in powder form.

Earthenware: Low-fired pottery, fired at temperatures below 2000 degrees F.

Extruder: A tool that produces specific shapes when clay is forced through a hollow tube.

Faceting: A decorative technique, involving cutting away vertical slices from a cylindrical form to produce facets, is normally associated with wheel-thrown pottery.

Firing: Making clay products permanent by baking at high temperatures.

Fluting: A technique of cutting decorative grooves into the clay surface. The grooves can be flat, concave, or covex in section, and are usually made with special fluting tools designed to allow the removed strips of clay to fall away after cutting.

Foot: The base, bottom, legs or ring forming the area that a ceramic piece rests upon.

Glaze: A liquid suspension of finely ground minerals which is applied on the surface of bisque fired clay. The glaze ingredients will melt together when fired to form a glossy glass-like surface.

Grog: Clay that has been fired then crushed to form a coarse, medium-grained of fine sand-like material. The addition of grog to clay reduces shrinkage, reduces drying or firing cracks.

Greenware: Clay in an unfired state.

Kiln: A furnace used for firing clay products; electric, gas and wood-fired.

Leather-hard: Clay that has dried sufficiently to be stiff, but which is still damp enough to be added to other pieces with slip.

Loop tools: Tools with ribbons of wire for shaping and trimming ceramic objects.

Maturity: The temperature or time at which clay ware becomes of hard or vitreous enough to have desirable characteristics or when glaze reaches the point of complete fusion.

Middle Ages: The period of European history from about 500 A.D. to about 1500. Also known as the "Dark Ages."

Neolithic Period: Related to the latest period of the Stone Age (after 10,000 B.C.) , pottery was used in conjunction with woven baskets for storing gathered materials.

Organic materials: Of plant, animal or human origin.

Oxidation: The act of combining with oxygen, usually at high temperatures.

Peephole: A small observation hole in the door or wall of a kiln.

Piece Mounting: Related to pinching – add clay little at a time, pinching it firmly to a previously formed object – may be modeled around another form.

Piercing : A decorating technique where clay is cut or pierced to create a formal, complicated or loose pattern of holes into a clay wall.

Plasticity: The quality of clay which permits it to be readily shaped into different forms without cracking or crumbling.

Plastic state: Clay can be scratched, incised, cut away, drawn into added to, etc.

Porcelain: prepared clay bodies, most dense of all-very brittle- used for expensive dinnerware, etc., fired at temperatures of cone 13 (2462*F).

Porosity: The quality or degree of being porous, filled with holes, capable of absorbing liquids.

Relief: Sculptural form which projects from a background.

Rib: A flat tool - Usually wood, used to refine shapes being thrown on a potter's wheel.

Roman Occupation: That period when Roman dominance (cultural and military) was spread throughout Europe.

Scoring: Making marks on the edges of two pieces of clay before joining with slip.

Slab: Clay evenly rolled and formed and formed by draping or joining.

Slip: Liquid clay, clay in liquid suspension, used for joining.

Stacking: Loading a kiln.

Stilts: Porcelain tripods on which glazed ware is fired. Stilts for low fire work may have points of nichrome.

Stoneware: Natural clay fired at a higher temperature of around cone 08. This is a more dense clay and will hold water without glaze.

Terra Cotta: A mixture of either earthenware or stoneware and small pieces of clay that has already been fired (GROG). This gives it a texture.

Throwing: The process of shaping clay on the potter's wheel.

Trailing: A thin line of slip added to clay.

Trimming or **Turning**: Completing a piece of leather hard clay by holding cutting tools against it while turning.

Wedging: A process by which clay is kneaded to force out air bubbles, to align coarse particles, and to develop a homogeneous consistency.

Wedging board: A surface on which clay is wedged, usually made of plaster or wood covered with canvas.

Wheel: Machine for making symmetrical pots; driven by hand, foot, or electric power.

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CERAMICS BASICS:

Clay is decomposed granite rock made of fine particles which give it a plastic (flexible) quality.

TYPES OF CLAY: There are are many different kinds of clay (Earthenware, Stoneware, China, Porcelain, Terra Cotta, etc). Each will result in a different appearance of color, texture and shape. Within the clay itself are elements and qualities that determine the limitations, possibilities, and necessary processed for its use.

MOISTURE CONTENT: Clay should be kept moist and covered in an airtight container when not being used.

Clay that is too wet may not hold shape and collapse.

Clay that is too dry will not join well with other clay bodies and will crack.

***In order to work with clay for more than one class period, it will be necessary to place it in an airtight container (plastic bag) and place it on your shelf.*

If clay becomes too wet – spread it on a dry surface and knead it thoroughly to remove the moisture.

If clay becomes too dry – spread it on a wet surface and cover with damp sponge, paper towels or cloth.

PREPAIRING CLAY: Before working with clay, it is necessary to knead and wedge it to remove air bubble and make the clay consistent. If this is not done, your piece may blow up during the firing process.

CERAMICS is the art of making things from fired clay.

BUILDING TECHNIQUES:

1. Pinch Method
2. Piece Mounting Method
3. Slab
4. Coil
5. Throwing

*** Consideration must be given to the thickness of clay walls, moisture content and methods for joining clay.*

STAGES OF POTTERY MAKING :

1. Greenware
2. Bisqueware
3. Glazeware
4. Ceramic

GLAZING:

A layer of oxide material that when fired, undergoes a chemical change and becomes a thin layer of glass over the fired piece. Many different colors are possible. When firing, the objects should be placed about _" apart and from the sides of the kiln to prevent the two surfaces from bonding together.

The purpose of a glaze is to decorate and waterproof a ceramic object. A clay body should be glazed in order to make it water-tight.

Glazing is generally done by brushing, pouring, dipping or spraying.

TOOLS:

1. fettling Knife
2. wire loop & ribbon tools
3. various types of clay sponges
4. bats
5. potter's wheel
6. pug mill
7. various types of potter's ribs
8. scrapers
9. wire clay cutter
10. trimming tools
11. needle tool
12. calipers
13. modeling tools

KILN ITEMS:

1. kiln
2. stilts
3. kiln shelves
4. shelf supports
5. cones

PROCESS FOR USING THE POTTER'S WHEEL:

1. Preparation - wedge clay, form into ball shape, prepare the wheel, bat and tools.
2. Force the clay onto the bat or wheel head.
3. Center the Clay.
4. Open the Clay.
5. Pull up the sides slowly.
6. Shape and decorate the thrown object.
7. Trim bottom (skirt) of object at bat or wheel head.
8. Cut off using the wire clay cutter.
9. Cover project.
10. Clean tools, wheel, and sink area.