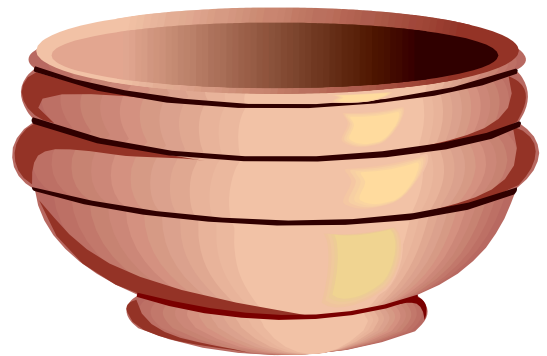




Vaporite County AH Ceramics



It is the policy of the Cooperative Extension of Purdue University that all persons shall have equal opportunity and access to its programs and facilities without regard to race, color, sex, religion, national origin, age or handicap.

Project Requirements

Ceramics is that craft considered greenware. Plaster and hand formed pieces should be entered as a General Craft.

General rules for all exhibits:

- Members must clean their own projects.
- Name (or initials) and date must be carved into bottom of all items.
- All articles must be glazed inside.
- Finish bottom of project; do not cover with felt or other materials.
- Each exhibit must include a 3" x 5" card with name, grade, description of article and the techniques used in each step of the process.
- Bring your project in a box.

Beginner (Grades 3-5) – Learn and practice good cleaning and preparation of greenware. Advance in technique each year.

- A. 3rd grade – Exhibit one article that you have cleaned, fired, and glazed, using one or two colors.
- B. 4th grade – Exhibit one article that you have cleaned, fired, and glazed, using more detail than previous year. Use no more than 5 colors.
- C. 5th grade – Exhibit one article that you have cleaned, fired, and glazed. Use underglazes and glazes.

Intermediate (Grades 6-8) – Learn about stains. Advance in difficulty each year. Exhibit in one of the two following categories:

- A. Stains – Exhibit one article or set of articles using more than one color. May use different techniques such as washdowns, dry brushing, chalking, antiquing, shading, translucents, or a combination of techniques.
- B. Glazes – Exhibit one article or set of articles using specialty glazes. Glazes with texture, crystal glaze, or art glaze may be used.

Advanced (Grades 9-12) – Each year, progress in difficulty level of technique. Exhibit one article or set of articles in one of the following categories:

- A. Glazes – Lusters, gold, silvers, opals, decals, overglazes.
 - B. Stains – Use glazes and other techniques together.
 - C. Lifelike animals or figurines using realistic stains.
 - D. Porcelain
 - E. Carving, spraffito, clay lifting.
 - F. Holiday Village*
- If your greenware project is a set that has more than 5 pieces, take a picture of the complete set and exhibit the picture with the five best pieces.

Greenware Casting

Greenware is the name given to unfired clay objects. The objects have been made by casting (pouring or filling) plaster molds with casting slip (clay in liquid form). Their shapes are formed by the molds and when removed from the molds and dried, they are still raw clay. In this state, they are called greenware. Greenware is very fragile and must be handled with care.

Preparing the Greenware

It is well to have a good supply of the so-called conventional tools which are vital and necessary to obtain good results. For beginners, the list is simple and kept to a minimum:

- One piece of greenware
- One clean-up tool
- A sponge (silk sponge is preferred)
- A small bowl of water
- Sheets of newspaper
- A dusting brush (a soft bristle brush which removes dust from the article; a sander or fine grade sandpaper or glazing)
- Sander of fine grade sandpaper
- Various size brushes for painting or glazing

Cleaning the Greenware

The greenware is not dirty but it does have seam lines which are created where the pieces of mold join together. Cleaning the greenware is merely carefully removing these seam lines and other small imperfections from the object before it is decorated or bisque fired.

Wait until your greenware is bone dry before cleaning. Handle greenware with care, as it is very fragile and easily broken.

1. Place it on a paper.
2. Take a clean up tool (an old paring knife or a narrow, short, sharp blade will do) and cut the seams away.
3. Use sandpaper to smooth the seams out. They are still there as long as you can feel them with your finger. If you don't feel them, they're gone.
4. Run your fingers around the edges. Use your tools and sandpaper to remove all the sharp edges.
5. If there are little areas of reveletts where some protruding part might have been attached in the casting, clean these off. Such a place might appear where the cup handle joins the cup, etc.
6. Set the piece aside after brushing it off. Empty the dust into a waste can.
7. Thoroughly wet your sponge in water. Squeeze it quite dry. Sponging is necessary, but do not sponge more than is absolutely needed. If you oversponge, it can have a sandy look when it is fired with glaze.
8. Go over every area you have cleaned with your tool or sandpaper, smoothing as you go. Wash the sponge as often as necessary; don't let it get gummy.
9. At this point a small pin point pit may occur. Dip your finger into clean water and let a drop fall onto the pin point. This will show you how large the hole is in your article.
10. Dip your finger into the clean water again and then into the dry dust saved from cleaning the piece. Place this dust on the pin hole is filled, then wet finger once more and smooth to the exact surface of the article.
11. Never force a sponge into an area such as handles, etc. Use a small brush dampened in water and wash down as is you were sponging that area.
12. In a desirable area (usually the bottom), write your name, or initials and date. Dampen the area and trace over your first writing with the clean up tool until the name looks like it is carved into the ware.

MENDING GREENWARE

1. Using sandpaper or a knife, scrape some clay from the bottom of the dried ware.
2. Mix it with the slip of the same clay and wedge the mixture tightly into the crack with a brush or modeling tool.
3. If the piece has a clean break, it can be mended by making the pieces slowly and uniformly moist to the leather-hard stage by wrapping with a moist rag and oilcloth.
4. Mend the broken pieces with thick slip.
5. If the piece is badly broken it cannot be mended.

GLAZING

A glaze is a chalky-like mixture of raw chemicals that is used to coat articles of clay. The chemicals consist of glass or silicas which melt in firing. These fire into a solid body forming a glassy finish over the ware.

GLAZE TYPES

1. Transparent Glazes – Clear dipping, spraying, or brushing glazes are all transparent glazes. The clay body or the designs and color which were used in underglaze show through.
2. Semi-transparent Glazes – The clay shows somewhat through the glaze.
3. Opaque Glazes – Will not let the clay body show through.
4. Crystal Glazes – Glazes combined with crystals which melt in the firing to form interesting patterns.
5. Art Glazes – Glazes which break up in firing into a pattern or into multicolor effects.
6. Metallic Glazes – Glazes which take on a metallic look when fired. Glazes are available which look like wrought iron. Lava, volcanic rock, et.
7. Crackle Glazes – After firing, these glazes will break up into a controlled crazing producing a lacy design or an antique look, and are generally stained in the cracks to make the effect more apparent.
8. Opaque Underglaze – Paint which is used on greenware (raw clay), fired once and put “under glaze”, then refired. This paint remains exactly where placed. It has no highlights on the edges. Being opaque, its primary use is all-over coverage.
9. Detail Underglaze – Paint designed for detail work on greenware or on an underglaze all-over color.
10. Transparent Underglaze – Concentrated color for designing on greenware or all-over color underglaze with freehand technique.
11. Overglazes – Overglazes consist basically of gold, silver, platinum, copper and various lusters, marbelizers, and china paint. It must go over a form which has been glazed and fired.
12. Stains – A group of colors applied to ceramic object which have first been bisque fired. No additional firing is necessary. Stains are to be used only on decorative items. They should not be confused with the finish obtained by using fired glazes.

CHOOSING A GLAZE

1. Each type of glaze comes in three basic finishes:
 - a. Gloss
 - b. Satin
 - c. Matte
2. If the article you have made is to contain food or drink, be sure to buy a lead free (food safe) glaze.
3. Earthy tone glazes (tans as opposed to bright yellows, or rust and copper colors as opposed to bright reds and oranges) and glazes that do not have a high gloss are more appropriate for the “natural” look of hand-built pottery.
4. A different glaze may be used inside the piece from what is used on the outside, if desired. Be sure the two colors coordinate.

5. Most glazes show up differently on red clay than on white clay after they are fired. Make sure the sample of the glaze you are choosing has been done on the same color of clay you are using so you get the result you want.
6. Be sure to ask if the glaze you have chosen has a firing temperature that will work on the clay you are using.

APPLYING GLAZE

Follow directions on the glaze bottle you purchase, especially for crystal glaze. The following directions apply to most glazes:

1. If the article has a flat bottom, do not glaze the bottom at all.
2. If the article has rim at the bottom (called a foot), glaze everything but that rim.
3. Handle the glazed surface as little as possible.
4. Any glaze that has dripped onto the bottom of the piece must be cleaned off with a damp, not wet, sponge.
5. When the glazed piece no longer feels cold to the touch, it is ready to be glaze fired. Be sure the person doing the firing knows the maturing temperature for your glaze. This is the temperature to which your article must be heated. The temperature should be on the jar and will probably be described in cones (i.e. fire to cone 05). See advanced ceramic books if you want to know more about firing.
6. When glazing, remember to keep brush loaded. If brush drags, reload.
7. Don't backstroke. Backstroking is repeatedly painting an area.

METHODS OF APPLYING A GLAZE

Brushing – Applying glaze with a brush is the simplest method.

- A. Glazes may be painted on ware with a medium brush, a method satisfactory for small pieces.
- B. The article should have three coats of glaze brushed on, one right after the other, in even strokes in opposite directions – horizontally, vertically, and diagonally.
- C. Apply glaze rather thickly except near the bottom of the piece.
- D. A wide (3/4" to 1") brush of glaze works best.

Sponging – Glaze can be applied to ware with a soft sponge. This is a very easy and yet quite effective way of applying even coats of glaze. When using an underglaze, sponging gives a nice texture.

Pouring – Pouring requires less glaze than dipping, and the technique can be applied to a greater variety of shapes.

- A. The only way to glaze the inside of a pottery shape with a narrow neck is to pour the glaze in, rotate the piece so that the whole inside surface is covered, and then pour out the excess, shaking the piece to make sure that all excess is removed.
- B. The glaze should be a little thinner for this operation.
- C. The operation must be done rapidly to avoid filing up too thick a coat or an uneven one.

*Dip Glazing – This is done by dipping the article into a bowl of glaze. Its chief drawback is that a rather large amount of glaze is required.

*Spraying – One of the most satisfactory ways to get an even coat of glaze on a piece. When glazes are sprayed, it is possible to achieve even gradations of tone. Spraying is a good way to glaze textured surfaces.

* For more information on the above methods, refer to a ceramic book or instructor. These methods are not recommended for the beginner.

GLAZE DEFECTS

A Few of the more common glaze defects are:

Crazing – This occurs when a glaze shrinks more than the clay it is on. It shows up as tiny cracks on the surface of the piece. Sometimes these develop as soon as the piece is removed from the kiln; often they do not appear until several days or weeks later.

Crawling – When a piece comes out of the kiln with bare spots where the glaze has moved away from a portion, exposing the body underneath, the defect is called crawling. Crawling may be caused by dirt or oil on the surface of the piece when it was glazed, too thin an application, firing before the glaze dried, or sometimes, underfiring. A piece marred by crawling can be glazed again and refired.

Sandpaper Surface – A rough sandpaper-like surface indicates that the glaze was not put on thick enough.

Shivering – When sections of a glaze crack off after firing, the fault is called shivering. This is the opposite of crazing; the body has shrunk more than the glaze so that the glaze is under pressure.

GENERAL FACTS ABOUT GLAZES

1. Care should be taken never to get glaze mixture in the mouth. While it is not harmful to get glaze on fingers and hands, be sure to wash thoroughly when finished.
2. Glazing is most often done to an article of clay after the bisque firing.
3. Purchasing liquid glaze in small jars from a local ceramic store is the most convenient method.
4. The true color of a glaze is achieved only after the coated article is glaze fired.
5. Always stir glaze before using.
6. Sometimes the colored glaze of some ware may affect the glaze on other ware placed near it during the firing.
7. Many glaze defects may be corrected by reglazing and refiring. Glaze applied on fired glazed ware should be thick.
8. A thin piece of ware, after glaze has been applied to the inside, may be too wet to take any glaze on the outside. The outside should be glazed after the inside is dry.
9. When glazing sculpture, scrape off excess glaze in places where it may obscure the modeling (eyes, nostrils, hair, mouth, etc.).
10. Always read instructions on paint labels before beginning your project.
11. Always do backgrounds first on plaques or similar objects, flesh colors on figurines, etc.
12. Don't use underglaze if it pulls on the brush or is rough textured. Thin with water if too thick. Underglaze must be done smooth before firing, as it does not move in firing. This can be done by rubbing with fingers to smooth after each coat has dried.
13. Always remove dust particles from pieces before staining or glazing.
14. When staining, remember a little paint goes a long way. Always smooth out your paint before it dries; once it has dried, that is how it will look.