

Glazes



Image Source: <https://s3-us-west-2.amazonaws.com/reference/images/pictures/hjggfcq4x2.png>

Unit 5

Project Requirements

Create one functional or decorative art piece that is at least 4" in width or height and no larger than 12" in width or height using basic reactive glaze technique(s). The art piece may be either purchased in greenware, bisqueware or a hand-constructed piece created by the member. Judging will primarily be on the quality of glaze application and firing techniques.

- Enter the Glazes Hand Constructed class if the exhibit item was made by the member.
- Enter the Glazes Purchased Greenware/Bisque class if the exhibit item was purchased by the member.

Basic Information

Glazes are usually applied to bisqueware. They may be applied to greenware in certain cases. Follow manufacturer's suggestions. Glazes:

- Require specific application using the correct brush.
- Require different firing temperatures. The temperature that the glaze must be fired to must match the temperature that your clay body can be fired to.

Always read manufacturer's labels for application and firing directions.



Types of Common Glazes

- Gloss (may be opaque, semi-opaque, transparent or semi-transparent).
- Art (may be gloss, satin or matte that breaks into two or more colors).
- Crystal (may be gloss, satin or matte that has rock like crystals that melt in the firing).
- Crackle (may be gloss, satin or matte). Antique with an ink thin, dark, satin to enhance crazes.
- Satin (moves very little in firing).
- Matte (does not move in firing).
- Woodgrain (has a soft crystal that must be brushed out to give wood grain effect).
- Textural (creates various textures from very fine to very coarse).
- Special effect (is a "stay put" glaze that can be used under, over or between colored glazes).

Have your project leader, parent and/or ceramic studio owner help you choose your greenware and glazes. They will be able to assist you in your choices and guide you.

Glazes Technique List

Place a check mark in the column of skills you would like to learn. Put the date when you learned the skills in the checklist below. Discuss skills you would like to learn with your leader. She/he will be able to give you hints about how to achieve your goal.

Ceramic Knowledge and Goals Checklist	New skills I have learned	Skills I want to learn or improve
Removing seam lines and imperfections from the greenware, with the proper tools.		
Altering the greenware pattern for a special effect.		
Application of an opaque gloss glaze with an ox hair or nylon glaze brush.		
Application of a transparent and/or semi-transparent glaze with a nylon glaze brush.		
Application of an art glass glaze with an ox hair or nylon glaze brush.		
Application of an art satin and/or matte glaze with a nylon glaze brush.		
Application of a crystal glass, satin and/or matte glaze/s with a fan brush.		
Application of crackle gloss, satin and/or matte glaze/s with an ox hair or fan brush.		
Application of woodgrain satin and/or matte glaze/s with an ox hair or fan brush.		
Application of a textural glaze using a brush, paint knife, sponge or other instruments.		

Ceramic Knowledge and Goals Checklist	New skills I have learned	Skills I want to learn or improve
Application of a special effect glaze using a brush, paint knife, sponge or other instruments.		
Antiquing with glazes.		
Application of a combination of different color glazes, one over another, for a mingled or multi-colored effect.		
Application of a combination of different color glazes, a deliberate placement of colors, controlling the colors.		
Application of glaze contained within a design area.		
Sgraffito through glaze/s using two or more glaze colors.		
Inlay of glazes into certain areas of pattern.		
Majolica: A glaze decoration over a matte or satin glaze. Limited amount of underglaze for outlining only will be accepted.		

Unit 5 - Glazing Tiles Project 1

Basic Information

Project 1 is designed to be a learning introduction. Project 1 for a member repeating Unit 5 is designed to be a progressive learning experience. Learning projects are usually not entered in competition. Be sure to include pictures of this activity in your record book. Glazes should be purchased, as mixing glazes requires a much more expensive and experienced level of training that involves handling powder form chemicals that must be measured and weighed out in very specific recipes that should only be done by a professional. Activity items, such as tiles, functional pieces, and your exhibit piece can be either made or purchased.

- This piece will be considered as one of your required pieces. Learning projects are usually not entered in competition. Be sure to include pictures of this activity in your record book.
- In this project you will purchase your basic brushes, tools, greenware or bisqueware (if desired) and paint. Repeating members will need to learn the use of new brushes, tools and techniques.
- You will be learning many new ceramic terms from your leader and/or the glossary at the end of this manual.



Steps

1. Purchase or make two 4- or 6-inch square slab tiles. One tile could be textured and one could be smooth in order to display application techniques.
2. Prepare a work area with suitable covering.
3. Follow the safety rules.
4. Clean tiles using proper tools.
5. Initial and date the tile on the bottom for identification. This is a requirement.
6. Senior and/or repeating members may leave the tiles in greenware form and go to the next step.
7. With a pencil, divide each tile into four sections. Using a sgraffito tool, incise the pencil lines. Be creative!
8. Bisque-fire your tiles according to the glaze label firing instructions.
9. Keep accurate notes as you proceed.
10. Prepare your work area with suitable covering.
11. Remember the safety rules.

Unit 5 - Glazing Tiles Project 1

Steps Continued

12. Using a damp sponge clean kiln dust from your tiles.
13. Senior/repeating members will choose two or more different glazes. Using your knowledge of the color wheel, choose the colors you would like for your tiles. Your leader will guide you.
14. Apply the recommended number of coats of glaze, as stated on the glaze label, on your tiles. Be sure each coat is dry before applying the next coat. Be sure NOT to glaze the bottom of your tiles so that your glaze does not fuse your tiles to the kiln shelf in the firing process. The bottom of each tile should be clean and flat. You can wax the bottom and sides of your tiles to ensure your glaze does not get on them.
15. Have your pieces fired to the glaze label recommended cone size.

Unit 5 - Glazing Functional Pottery Project 2

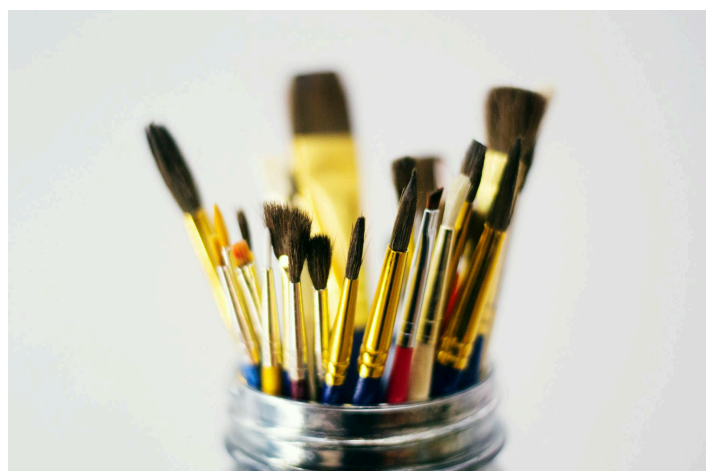
Basic Information

Project 2 for the first year member will serve as a functional piece. You may use it as your water cup throughout your ceramic projects. Members repeating this unit may want to do a brush holder or another functional piece of his/her choice. Be creative! Your functional piece may be either made or purchased. Pieces should have some textured areas to observe the glaze on different surfaces when fired on a vertical standing object as opposed to a tile that lays flat. Use up to two glazes only. This is a required learning piece. Learning projects are usually not entered in competition. Be sure to include pictures of this activity in your record book.

Suggestions

For seniors and repeating members:

1. Try design work by using glazes over a Matte or Satin glaze. This is called a Majolica technique.
2. Seek more techniques from ceramic publications and/or your local ceramic studio.
3. Try one of the skills on the glazes technique list provided in the beginning of this unit.



Unit 5 - Glazing Functional Pottery Project 2

Steps

1. Select suitable greenware or bisqueware (small figurine, vase or plate) or make a piece using the techniques from units 1, 2, 7, 8, or 9.
2. Prepare a work area.
3. Remember the safety rules.
4. Carefully clean seam lines from your greenware with proper tools. The circumference of the cup lip must be the same width all the way around. This is accomplished as you smooth the rim.
5. Have your piece bisque fired according to the label instructions.
6. Keep accurate notes as you proceed.
7. Clean the bisqueware piece with a damp sponge and let it dry completely, apply a wax resist or do a hot wax dip to the bottom of your piece. Make sure the wax completely covers the bottom and comes up the sides about $\frac{1}{8}$ " to ensure the clear coat glaze does not get applied too low on the sides of the piece or any gets on the bottom of your piece because this can cause your piece to stick to the kiln shelf in the second firing.
8. After cleaning your bisque and waxing the bottom of your piece, roll one "rolling coat" of glaze inside your piece. Your leader will help you mix your glaze for a rolling coat. Be sure to leave your piece upside down until dry, resting the rim of the piece on a clean tool or pencil. This will avoid over glazing the inside. Continue by glazing the outside. Be sure each coat is dry before beginning your next coat. You may use the same color/s as you used on the tiles.
9. Fire according to the label instructions.



Unit 5 – Glazes Exhibit Piece

Basic Information

Great! You have completed Projects 1 and 2! Skills you have learned include:

- Proper cleaning of greenware
- Waxing the bottom of your piece
- Application of glaze of your choice
- Rolling glaze inside a piece
- Butting (or melting) two glazes

You are now ready to complete Project 3 which may be your exhibit piece. If time permits, you can complete several projects. You may want to do an evaluation on each of your pieces that are exhibit considerations. This would let you determine which would be your best piece for exhibit. You may glaze either a made or purchased functional OR decorative art piece with up to two colors completed in the firing process, displaying at least one of the learned glaze applications.



Suggestions

1. You may use the same skills learned on your third project or refer to the glaze technique checklist to learn and complete a new skill.
2. Before choosing your project piece, and if you have the opportunity, go to several ceramic studios to see what is available.
3. Look through ceramic publications for technique ideas.
4. Be sure to stay within your unit medium (glaze).
5. You may want to change your piece by carving a design into the dry greenware or by cutting a design into wet greenware. You may change the design of your piece as you like. This is considered a greenware adaptation, but is still within your unit if you use glaze as your medium. Be sure the greenware is casted a little heavier than normal. Extra care will be needed because there is a degree of risk in breakage. This is not recommended for ages 8 through 13 years, but would be an excellent technique for senior members.

Unit 5 - Glazes Exhibit Piece

Steps

- 1** Select suitable greenware or bisqueware (small figurine, vase or plate) or make a piece using the techniques from units 1, 2, 7, 8, or 9.
- 2** Follow cleaning greenware steps as outlined on page 34.
- 3** Decide on the technique you wish to achieve. Your leader will guide you. If you do not have a ceramic project leader, contact your Extension Specialist so she/he may be able to connect you with a local project leader or a knowledgeable person. If neither is available, you can research what you want to know on the Internet, at a library, or ask staff at a ceramics supply store.
- 4** Keep accurate notes as you proceed.



Guidelines for Judging Your Project

Basic Glaze:

- Color and texture enhance the item
- Smooth and even in color
- Clear, not cloudy from application of too much glaze
- Not speckled from floating glaze in kiln
- Adequately cleaned and sanded bottom as explained on page 20
- Type suitable to use (i.e., lead-free glazes for pieces that will contain food or drinks)

Satin, Matte, and Woodgrain Glazes:

- Satiny, soft, smooth finish
- Woodgrain should give a wood-like appearance
- Enhances overall design of item
- Shows minimum stilt marks