

UNIT 6

HAND CONSTRUCTION WITH STONEWARE

Requirements:

Refer to requirements Unit 6 on page 2

Basic Information:

Hand Construction with Stoneware:

- (1) Stoneware is more or less vitreous depending on the temperature to which it is fired.
- (2) Hobbyist can rarely fire stoneware to a point where it is completely vitreous; as a result food and drink containers must be glazed inside.
- (3) Most stoneware clays are buff or gray in color when fired. These colors lend well to bold designs and intense colors rather than pastel tones.
- (4) Stoneware is more chip resistant than earthenware when fired to proper maturing cone.

Preparing Clay for work:

Most clay is packaged in 25# moist blocks. Before hand building or throwing on the wheel the clay must be wedged (kneaded) to condition and to drive out the trapped air bubbles. To knead (wedge) the clay, take the amount of clay you feel comfortable with and form a ball. Flatten the ball of clay to a degree. Grasp the edge with both hands and fold it into the center of the ball with a downward push. Give the ball a quarter turn and repeat. Repeat the grasp, fold, push and quarter turn routine until the clay is smooth, plastic like and free of air bubbles. Check at intervals by cutting the ball in half with a cutting wire. If there are no air bubbles visible on the cutting surface, the clay is ready to use. Do not be surprised if you must spend 15 minutes or longer, on this process. You can never over knead the clay. Air bubbles can create problems, causing the piece to explode in the firing.

Some potters will season the clay after the initial preparation. In the seasoning process, you will want to store workable sizes of clay inside an airtight container for a day or two. The result is a clay body that is highly workable.

Keep accurate notes as you proceed.

Evaluate your project using the judging sheet on page 63 as a guideline.

UNIT 6

HAND CONSTRUCTION WITH STONEWARE

Skill Options:

Pinch Pot:

A simple pinch pot is recommended for beginning Juniors.

Tools and materials needed:

Clay.

Cloth.

A small container of water.

Modeling tool.

A small Sponge.

Procedure:

You should have a piece of prepared clay that will fit easily into the palm of your hand (about the size of a tennis ball). Shape the clay into a round ball. Hold the ball of clay in the palm of one hand and push the thumb of the other hand into the center of the ball. Rotate the ball as the thumb and fingers form the pot with a gentle squeezing method. Let the first two fingers press from the inside and your thumb press against the outside. Always support the clay in one hand while working with the other hand. If the wall starts to crack as you work on it, moisten and mend the crack. Be careful not to let your piece get too wet. When your pot is about ¼ inch thick (bottom and sides), press the bottom of the piece gently against a level surface (i.e. a table top). This will create a flat bottom and prevent the piece from “rocking” when upright. The rim may be leveled by using a knife or nail scissors. A damp sponge can be used to smooth sides and rim. Carefully carve a design and/or apply texture to the sides of the piece. Scratch your initials and date on the bottom. Let your piece dry thoroughly and fire the piece to the correct cone size. The piece may be glazed and fired again to the proper cone size.

Sculpture with pinch pots is recommended for seniors and/or repeating members.

Animals are great fun. Dinosaurs, pigs, elephants, mice, rabbits, owls, turtles, to mention a few, can easily be shaped by joining two or more pieces, using the pinch pot method. Use a crosshatch score on areas that will be joined. Make a slurry (slip) with a small amount of clay and water. Dampen both sides that will be joined with the slip and attach the pieces. Be sure to put an air hole, using a pin or needle tool, in pieces that may have air trapped inside. Small pieces such as legs, tails and heads can be solid. Be creative!! Evaluate your piece using the judging sheet (page 63) as a guideline.

UNIT 6

HAND CONSTRUCTION WITH STONEWARE

Skill Options Continued

Draped Shape:

Recommended for beginning Juniors.

Tools and materials needed:

Two strips of wood approximately 3/8" thick and 12" long.

A wooden rolling pin.

An 18" piece of canvas or burlap material.

An object which to drape the clay (slab) over (i.e. bowl, pan, rock, etc.).

One ball of, properly prepared, clay to accommodate the size of your project.

Small brush.

Small sponge.

Medium size piece of plastic.

Small container of water.

Small container for slurry.

Procedure:

Place the ball of clay in the center of the material. Place the strips of wood on each side of the ball of clay. Press the ball down and proceed rolling the clay with the rolling pin until you make a slab approximately 3/8" thick (figure.1). Trim your slab to a pleasing shape and smooth the edges. Carefully transfer your clay covered canvas, placing it over your convex shape (figure 2). You may continue to shape until you create the desired effect.

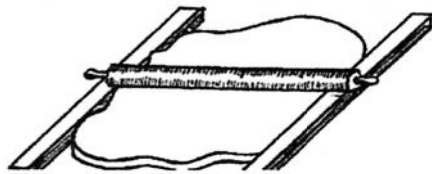


Fig. 1

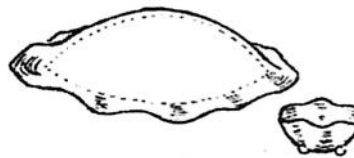


Fig. 2

To make feet for your project, roll 3 or 4 balls of clay (depending on size of project) of equal size and shape. With a small piece of clay, add water to make slurry (slip). Flatten one side of each ball. With a cleaning tool or sharp object, score the flat side of the ball and the bottom of your piece where the feet will be attached, making an x. Be sure the placement of the feet will be balanced on your project. With a small brush, paint a bit of slurry on the flattened end of the foot surface and onto the area of attachment. Press the foot firmly onto the primary object. Each foot (ball) should be equally spaced to ensure the piece will sit evenly on a flat surface. Take a damp brush or sponge and smooth the attachment site. Cover lightly with a piece of plastic to dry to a leather hard state. If the project is left too long, over the draped object, it will crack. The cracking is due to

UNIT 6

HAND CONSTRUCTION WITH STONEWARE

Skill Options Continued

Draped Shape Continued:

shrinkage of the clay. After drying for a while, carefully remove from the convex shape. When completely dry, clean rough edges and fire to proper cone size. Decorate as you like and fire again to the proper cone size. Evaluate your piece using the judging sheet (page 63) as a guideline.

Seniors and repeating members must show an extra degree of difficulty.

Sagged Shape:

Recommended for beginning Juniors.

Tool and materials needed (same as draped shaped).

Procedure:

This project is very similar to the draped shape project, except you are going to sag the clay covered canvas into your concaved article (i.e. bowl, free hanging sling, etc.). After preparing the slab to the size you wish, sag it into the article you have chosen for this project. If feet are desired, follow the directions in the draped shaped skill. **Do not attach at this point.** Wrap feet in plastic to keep wet until clay bodies are ready to attachment (Leather hard state). Cover project with plastic to dry slowly. After the piece is leather hard and will support itself, carefully turn it over and place the feet where desired. When the piece is dry, clean, fire and decorate as you wish. Fire your piece for the second time. Evaluate your piece using the judging sheet (page 63) as a guideline.

Seniors and repeating members must show an extra degree of difficulty.

Slab:

Tools and Materials needed:

Prepared clay (enough for the size of box you are making).

Paper, pencil and scissors to make your pattern.

Slurry.

Cleaning tool or needle tool for scoring.

Sharp, thin blade knife.

You can make many unique pieces with this technique. A simple box is recommended for beginning Juniors. **Seniors and repeating members must show an extra degree of difficulty.**

UNIT 6

HAND CONSTRUCTION WITH STONEWARE

Slab Continued

Procedure for a box:

Make a pattern for the top, bottom and walls of the box out of paper. Roll out your clay as directed in the drape shape section. Cut pieces from your pattern and lay aside. Let the clay pieces dry to leather hard state so they will support themselves. Beginning with the base, score the edges, add slurry and lightly press together until you have made the box. Roll out 1/8" coils. Add the slurry to the corners of the box and place the 1/8" rolls in the corners using your finger or a small round tool. Press and smooth coils into the corners while supporting your outside wall. By adding these coils, it will strengthen the construction of the box and keep it from falling apart or opening up in the bisque firing. If you wish a lid, score the top piece, add slurry and place the lid on top. Smooth the edges and the outside of the box. With a thin-blade sharp knife, approximately 1" (from the top) cut a wavy line all around the box forming the lid. (figure 1)

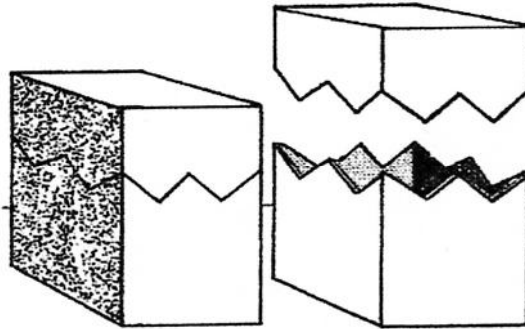


Fig. 1

Remove lid, turn upside down and re-enforce the corners. Place the lid back on the box to dry. If you want to add knobs or handles to your box, add them with the slurry at this time. (figure 2) Evaluate your piece using the judging sheet (page 63) as a guideline.

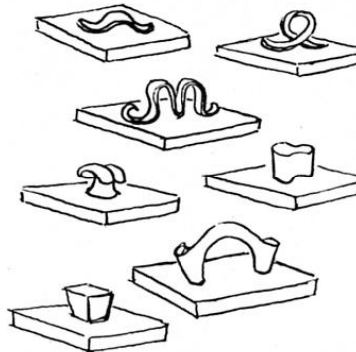


Fig 2

UNIT 6

HAND CONSTRUCTION WITH STONEWARE

Skill Options Continued

Slab box continued:

Cover with plastic, dry slowly so it does not crack. Fire your project to the proper cone size. Decorate as you like and fire again. Evaluate your piece using the judging sheet (page 63) as a guideline.

Coil:

Tools and materials needed:

- Prepared clay.
- Canvas, a plaster bat or a piece of plaster board.
- Slurry.
- Cleaning tool or needle tool for scoring.
- Knife or Fettling knife.

Vase or cylinder procedure:

Determine the shape and size of the pot and cut a base, following the slab technique. The base may also be formed by tightly formed coils, but the “coil type” base is more likely to open during the first firing.

Place the base on a piece of canvas, a plaster bat, or a piece of plaster board. You will now need a needle tool, small brush, slurry and a small container of water. Begin by rolling several lengths of clay rope pieces. They may be between ¼” to ½” in diameter and consistent in size. Score the top edge of the base and one side of the clay rope with a needle tool. Apply the slurry to the scored edge of the base and place a coil on top. Press firmly and smooth with damp fingers (Figure 1). The two rope ends that butt together should be cut on an angle, scored, and attached with the slurry.

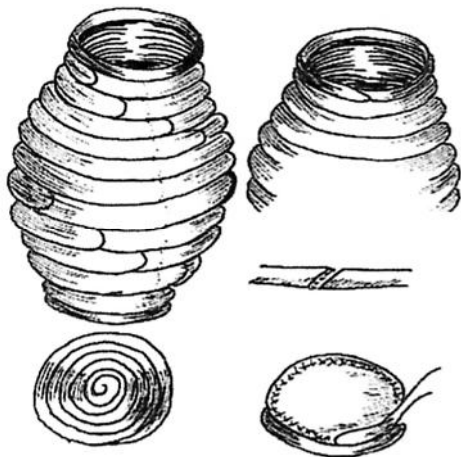


Fig. 1

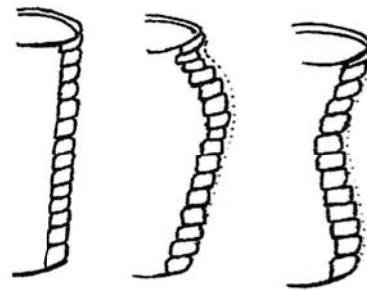


Fig.2

UNIT 6

HAND CONSTRUCTION WITH STONEWARE

Skill Options Continued

Slab Vase or cylinder continued:

The shape the piece may be changed (i.e. convex or concave) by simply making the clay rope longer or shorter. As you add the longer clay rope the pot will expand outward. Shorter clay ropes will create the opposite as they are added (figure 2). As you work the piece upward, after adding a few clay coil, smooth the inside coils with slightly dampened fingers. The outside may be also smoothed (optional). Smooth the edges. Let the piece dry slowly (by placing a piece of plastic over the piece) and bisque fire when completely dry. Glaze the bisque piece and fire to the proper cone size. Evaluate your piece using the judging sheet (page 63) as a guideline.

Sculpture:

Tools and materials needed:

- Prepared clay (the amount that your sculpture will need).
- Loop tools.
- Modeling tool.
- Cleaning tool or needle tool for scoring.

As your skills improved, you may try your hand at sculpturing. Let your imagination go wild.

Dinosaur procedure:

A dinosaur (or any animal) is a good subject for this technique. With a well-prepared (wedged and seasoned) ball of clay, shape it to resemble the body. Turn it upside down and remove the clay from the center with your loop tools. Keep the wall thickness under ½" thick. If you have air bubbles in your clay or have the wall too thick, it is likely to explode in the firing process. After body preparation, you can make coils and shape them into tail, neck, head, and feet. Attach them to the body, using the scoring and slurry method. Be sure to press the "add-ons" securely to remove air pockets. The scales can be made by pinching and shaping small balls of clay and attaching them to the dinosaurs back. Remember when attaching any "add-ons", make sure you do not trap air bubbles or you might have a dinosaur without some of its body parts. Be creative and have fun!! Evaluate your piece using the judging sheet (page 63) as a guideline.

UNIT 6

HAND CONSTRUCTION WITH STONEWARE

Skill Options Continue

Throwing on the potter's wheel:

You may have the potter's wheel available to you in school, but if not, you will have to find a potter who has access to a wheel to help you with this project. This is the most challenging technique to master. It takes practice, time and patience to make a piece in which you can be proud. Evaluate your piece using the judging sheet (page 63) as a guideline.

Decorative:

With this skill you can get very creative and original. Beginning with one of the skills, you can add combinations of carving, cut-outs, texturing, add-ons and unusual glazing and glaze combinations. You can indeed create some unique, one-of-a-kind pieces of art.

A technique for Seniors only. If you formulated your own glaze, be sure you include this in your story. Evaluate your piece using the judging sheet (page 63) as a guideline.

Basis tools for your pottery kit:

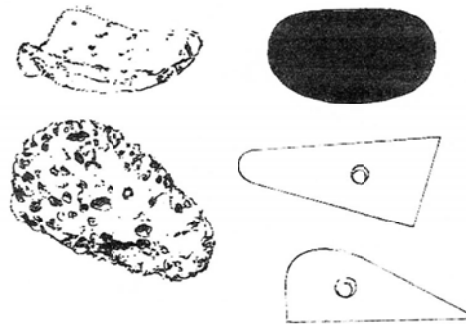


Fig.1

Fig2

Sponges: (Figure 1) Usually of natural origin in many shapes and sizes. Used for moistening clay for throwing, cleaning, and smoothing pieces. An Elephant Ear is a special fine grained sponge ideal for pottery.

Ribs: (Figure 2) Also called kidneys, are made of carved hardwood, rubber and metal. They are used for shaping and refining pieces.

UNIT 6

HAND CONSTRUCTION WITH STONEWARE

Basic Pottery Tools Continued



Fig. 3

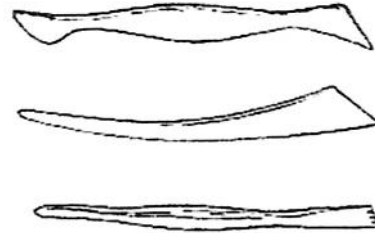


Fig.4

Loop Tools: (Figure 3) Made of hardwood with a loop of thin wire or flat metal at either end. They are used trimming, carving, decorating and many other uses.

Modeling Tools: (Figure 4) Hardware tool of many different sizes and shapes used to smooth joints and seams, also used for joining and to texture.



Fig. 5

Needle Tool: This tool has a thin needle projecting from one end of a wooden handle (Figure 5), is used for trimming, decorating and scoring.



Fig.6

Fettling Knife: (Figure 6) A special knife with a long, narrow blade used for trimming, carving and slicing clay.

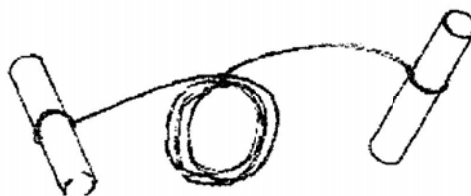


Fig. 7

Cutting Wire: (Figure 7) Thin wire with wooden handles at each end used to cut clay.

UNIT 6

HAND CONSTRUCTION WITH STONEWARE

Hand Construction Judging sheet

	E	G	F	NI	Comment:
Creativity					
Cleaning					
Construction					
Attachments					
Uniform Thickness					
Texture and Design					
Bottom sits well on table					
Glaze Application					
Centered well (wheel thrown)					
Evident Cracks					
Over all appearance					

E = Excellent

G = Good

F = Fair

NI = Needs Improvement