

Slab and Coil Constructed



Image Source: https://www.alabamaart.com/blogs/studionotes/introduction-to-pottery-handbuilding-throwing?srsltid=AfmBOoo8Als_Bb47EBXblsfYGbHL0zamK0W_288Rldy5wff3bHD3rf5U#techniques

Unit 2

Before you begin work on your Unit 2 project, review the "Basic Information" section from Unit 1 of this manual.

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 one of the hand building techniques listed without molds. Display items must be bisque fired only - NOT GLAZED.

- Slab (examples include a box, vase, cup, wall hanging, sculpture, etc.)
- Coil (examples include a vase, bowl, pitcher, or cylinder, etc.)

Skill Options

In this unit, you will learn two types of techniques for hand-building in ceramics; slab construction and coil construction.

Slab Construction

Slab construction is a hand-building technique in ceramics where flat sheets of clay (slabs) are used to make three-dimensional forms. The slabs are rolled out to a consistent thickness and then cut, joined, and shaped to form the desired object. Some examples of items you could make using slab construction include a box, vase, cup, wall hanging, sculpture, butter dish, jewelry dish, or a sponge holder.



Unit 2 – Create with Slab Construction Project 1

Tools and materials needed:

- Prepared clay (enough for the size of box you are making)
- Paper, pencil and scissors to make your pattern
- Slurry or slip
- Cleaning tool or needle tool for scoring
- Sharp, thin blade knife

Follow these directions to practice creating a box out of slabs of clay.

Steps

1. Make a pattern for the top, bottom and walls of the box out of paper.
2. Roll out your clay into a slab as directed in the drape shape section.
3. Cut pieces from your pattern and lay aside on a clean dry area, covered with plastic and/or a damp cloth so your slabs do not dry out too quickly.
4. Let the clay pieces dry to a leather hard state so they will support themselves.
5. Beginning with the base, score and slip all four of the edges.
6. For the walls of your box only score and slip three of the edges.
7. Lightly press together two walls to the base creating half of your box, and then add one more wall at a time until you have made the box.
8. Roll out 1/8" coils.
9. Add the slurry to the corners of the box and place the 1/8" rolls in the corners using your fingers or a small round tool, press and smooth coils into the corners while supporting your outside wall.
10. 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.
11. If you wish to make a lid, determine the design of it and how it will sit on the top of your box. If it sits flush to the top of your box, make sure to add a coil lip that will sit inside the box shape to keep your lid from slipping off the top of your box.
12. Smooth the edges and the outside of the box.
13. With a thin-blade sharp knife, approximately 1" (from the top), cut a wavy line all around the box forming the lid.
14. Remove the lid, turn upside down and reinforce the corners.
15. 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.
16. Evaluate your piece using the judging sheet as a guideline.
17. Cover with plastic, dry slowly so it does not crack.
18. Fire your project to the proper cone size.

19. Decorate as you like and fire again.
Evaluate your piece using the
judging sheet guidelines.

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.



Coil Construction

Coil construction is a hand-building technique where a vessel is formed by building up walls using long, cylindrical pieces of clay called coils. The coils are rolled out and then wrapped or stacked on top of each other to create the desired size and shape. Some items you could make using coil construction include a vase, bowl, pitcher, cylinder, mug, teapot, serving dishes, sculpture, and wall art. Coils can also be used to create unique textures on the surface of a piece, adding visual interest and depth.

Types of Coils for Coil Construction

There are various coil types used in hand-building. Coils are ropes of clay, which are stacked and joined to build up the form of the object. Using even pressure is key when rolling out a coil, so that it will be uniform. You can roll the clay between your hands, but it will be more even if rolled on a smooth work surface. It may take some practice at first to form the types of coils you would like to use in your project. Here are some of the different types of coils you can experiment with:

Rope Coils:

These are the most basic type, rolled into a long, rope-like shape.

Flat Coils:

These are flattened coils, often used for building up height quickly and creating precise forms with smooth surfaces.

Triangle Coils:

Shaped like triangles, these coils are strong and can be used to create interesting angles and distribute stress evenly.

Sculptural Coils:

These can be shaped into various forms and used to add decorative or structural elements to a piece.

Techniques for Using Coils in Ceramics

Rolling:

Clay is rolled into coils using even pressure between the hands or on a work surface.

Attaching:

Coils are attached to the previous layer using pressure, sometimes aided by scoring and slipping (applying a thin clay slurry).

Blending:

The connection between coils is blended to create a smooth, unified surface.

Smoothing:

A rib tool or other smoothing tools are used to refine the shape and surface of the piece.

Joining:

Coils can be joined in a spiral, sewed, or half-hitch manner, depending on the desired effect.

Building:

Coils are stacked layer upon layer, gradually building up the desired form.

You can try some of these additional ideas for constructing with coils.

- **Spiral:**

Coils are wrapped around the base in a spiral pattern to create a vase or bowl.

- **Stair-step:**

Coils are stacked with a slight offset to create a textured effect.

- **Snail coil:**

A coil is spiraled in on itself to create a rounded, textured surface.

- **Fence coil:**

Coils are attached vertically to create a fence-like structure.

- **Flat coil:**

Used for creating a smooth, even surface or for adding flat decorative elements.



Unit 2 - Create with Coil Construction Project 2

Tools and materials needed:

- Prepared clay
- Canvas, a plaster bat or a piece of plasterboard
- Slurry (slip)
- Cleaning tool or needle tool for scoring
- Knife or Fettling knife

Follow these directions to help you practice creating a vase or cylinder out of coiled clay.

Steps

1. 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.
2. Place the base on a piece of canvas, a plaster bat, or piece of plasterboard.
3. You will now need a needle tool, small brush, slurry and a small container of water.
4. Begin by rolling several lengths of clay rope pieces. They may be between 1/4" to 1/2" in diameter and consistent in size.
5. Score the top edge of the base and one side of the clay rope with a needle tool.
6. Apply the slurry to the scored edge of the base and place a coil on top.
7. Press firmly and smooth with damp fingers. The two rope ends that butt together should be cut on an angle, scored, and attached with the slurry.
8. The shape of the piece may be changed 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.
9. As you work the piece upward, after adding a few clay coils, smooth the inside coils with slightly dampened fingers. The outside may be also smoothed (optional). Smooth the edges.
10. Let the piece dry slowly and bisque fire when completely dry.
11. Glaze the bisque piece and fire to the proper cone size.
12. Evaluate your piece using the judging sheet as a guideline.



Unit 2 – Exhibit Piece

Basic Information

Now that you have explored the skill options for this unit, you will need to decide which construction techniques you would like to use for your exhibit piece to enter for judging at your county fair or 4-H exhibit judging day. Did you like creating with a slab or with a coil the best? Or you may want to explore combining techniques in one piece. It is time to be creative and have fun using your imagination! Whichever technique(s) you want to use for your project piece, have fun and enjoy the process. Your 4-H leader can help you decide if you are not sure which techniques you would like to use. Remember to apply what you have learned from the Principles and Elements of Design in Ceramics when designing your piece.

Bisque Firing

Once your exhibit pieces are dry, you will need to bisque fire them to prepare them for judging. Remember, glazes are not used in Unit 1 or Unit 2.

Guidelines for Judging Your Unit 2 Project

Judges look very closely at the following characteristics of your exhibit piece.

Creativity and Originality

- Shows thoughtful design, not just technical assembly.
- Unique interpretation of traditional slab/coil methods.
- Cohesive artistic voice or theme.

Cleaning

- Smooth areas are intentionally smooth; textured areas are cleanly executed.
- No unintended tool marks, fingerprints, or smudging.

Construction Quality – This evaluates how well the piece is built.

Structural Integrity

- Walls are even in thickness and appropriate for the form.
- Seams (slab joints, coil joints) are fully blended and secure.
- No cracks, stress fractures, or weak points—especially at joins, handles, rims, and lips.
- The base is level and stable.

Technique Mastery

- Slabs are compressed and joined cleanly; edges are smoothed.
- Coils are consistent and properly blended inside and outside.
- Corners, angles, or curves (if part of the slab form) are crisp or intentionally shaped.
- Attachments are secure

Unit 2 – Exhibit Piece

Guidelines for Judging Your Unit 2 Project Continued

Texture and Design – This evaluates the artistic and functional aspects.

Proportion and Balance

- Form feels visually cohesive and properly weighted.
- The piece stands evenly and is not unintentionally lopsided.
- Coils or slab surfaces contribute to the design rather than distract.

Bisque Fired Only

- Appropriate for either functional or decorative use
- Is the piece strong and sturdy? Check for cracks or areas that might break easily.

Workmanship – This looks at the overall care put into the work.

- Attention to Detail
- Edges, rims, and joins are refined.
- Demonstrates skill appropriate for the artist's stated level.

