

Key Terms
atmosphere
pyrometer
pyrometric cone
saggar
raku

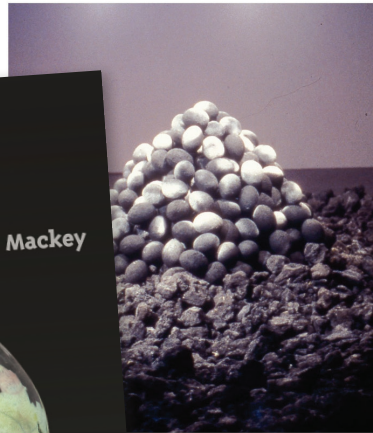
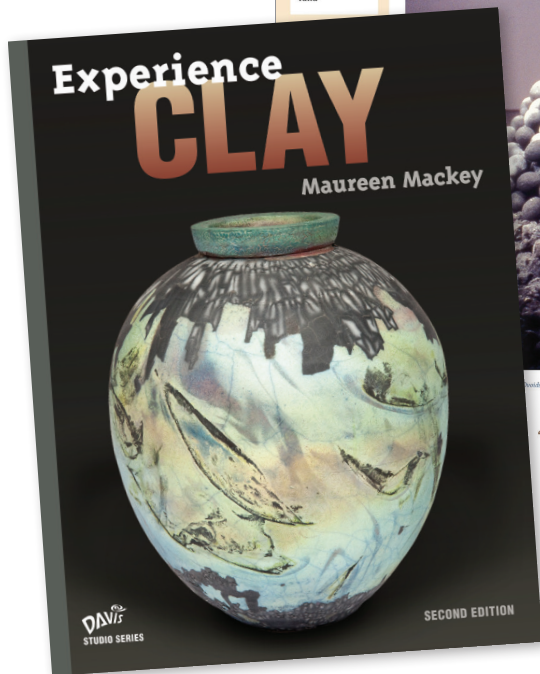
6 The Firing Process

The kiln is the potter's most important piece of equipment. Although you can make a clay pot or sculpture with only your hands, to create a durable ceramic form you must fire your work.

Whether simple or elaborate, the kiln should reasonably fit the needs of the studio or classroom. As a student, you may not be firing kilns initially, but you should have a basic understanding of the firing process, types of kilns, firing sequences, and the expected outcomes.

Kilns evolved from simple open-fire constructions that used grasses, wood, or dung for fuel to ones powered by oil, coal, wood, natural gas, propane, or electricity. Firing devices can be as primitive as a hole in the ground or as sophisticated as a computer-programmed structure.

In this chapter, you will:



Woods, 1997. Saggar-fired earthenware and volcanic pumice, 7' x 21' x 21'

"I think of these sculptures as three-dimensional drawings that will be visually transformed by the long six-day wood fire."
Don Reitz

Experience Clay

SECOND EDITION

By Maureen Mackey

Experience Clay is a powerful resource for ceramics teachers and students, including **hand-building** and **wheel-throwing techniques**, **firing**, and **mixed media**. Students are encouraged to discover their unique styles and interests while also learning about **ancient traditions** and **innovations in ceramics throughout history**. The comprehensive Teacher's Edition addresses the unique needs of the ceramics studio classroom.

Features

- In-depth Studio Experiences that engage and challenge students
- Step-by-step photographs and illustrations that detail fundamental techniques, from combining forms to raku firing
- Outstanding examples of professional quality student artwork
- An entire chapter dedicated to firing, including outdoor and alternative processes
- Interviews with professional ceramic artists and sculptors
- An in-depth Student Handbook with essential information on repairs, clay bodies, firing, and more
- Art history profiles that chronicle significant cultural influences



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Studio Objectives

Students will:

- understand and differentiate between incision and sgraffito incising techniques
- decorate a plate using incision and sgraffito on the rim and in the center, achieving a balanced and unified design

Materials

- sketchbook or sketch paper and pencil
- leather-hard clay (throw or hand-built)
- tools for incising or carving
- soft dry brush for removing clay dust and debris
- handwash
- colored slip
- rib tool

Setup

For hand-built plates, have students use the vide and mold method. (See pages 73–74.) Encourage them to think about how a hand-built design will offer a single way to incorporate a border. Remind students that one sign of creating a single clay surface is to incise, or cut into, the clay. Show them examples of work using incision and sgraffito techniques.

Studio Experience

Incised Design: Mishima and Sgraffito

You will use colored slip with two incising techniques—mishima and sgraffito—to decorate a plate. Mishima involves incising or carving lines into the surface of leather-hard clay and painting with colored slip to fill in the design. Sgraffito is the reverse, where slip is painted on the surface first and incising or carving reveals the color of the clay body beneath. Your design should feature one technique on the inside and the other on the rim as a contrast.

Mishima and sgraffito are proven techniques. Mishima is a Japanese word that describes a distinctive method of incision and inlay that originated in Korea during the twelfth century (see page 161 for an example). Sgraffito describes a method of incision that is used on a slipped surface. Ancient Greeks used this technique on their classic red and black ware in the fifth century BC.

Before You Begin

- Decide on the shape of your plate—for example, consider making a hand rim. You can either throw or hand-build your plate. When it is leather-hard, trim a foot and cover with plastic to keep it leather-hard.
- Observe patterns around you. Notice how lines accentuate the patterns. Make drawings in your sketchbook to develop a simple design for your piece. Use narrow and wide lines to add variety and intensity. Frame with a border that repeats parts of your design. The design can be abstract or realistic, tight or loose.

Think about how you will transfer lines to the plate. Will you place your design on the clay and trace it? Will you draw it on freehand?

Determine how you want to balance your design. Do you want to emphasize the center of your plate or the border? What mood are you trying to create? What colors fit best with your design?

You will need:

- pot and pencil
- leather-hard plate
- tools for incising or carving
- soft dry brush
- paintbrush to apply slip
- metal rib
- paper towels, sponge
- colored slip

Fig. 4-36. This plate is designed with sgraffito in the center and mishima on the border.
Tom Hughes, October 2001. Unglazed throw ware, 8" (20.3 cm) diameter. Courtesy of the artist.

Create It

- Select the area for your mishima design and draw or trace it onto the clay.
- Use pointed tools to incise the lines. With a dry brush, clear away dust and clay particles.
- Paint over the mishima area with colored slip.
- After the slip has dried, use a metal rib to lightly scrape away the excess.

Fig. 4-37. Incising center of plate with sgraffito design.
Thane by Nancy Gifford.

Fig. 4-38. Applying slip to green ware.
Thane by Nancy Gifford.

- Dust the plate with the soft dry brush.
- Paint the area for the second part of your design (sgraffito) with three coats of colored slip.
- When the slip has dried enough to handle, either trace or draw the outline of your design on the surface.
- Use different tools to carve or scratch through the slip to the clay body beneath.

9 Clean your sgraffito design with a soft dry brush.

10 Bisque fire your piece. Apply a transparent glaze, and complete with a final glaze firing.

Check It
Have you successfully used two different incising techniques? How did balance your composition? Of the two techniques, which had the subtler outcome? Which had the stronger impact? Describe what you learned from this exercise. Can you think of other ways in which you would use these techniques again?

Sketchbook Connection

Get aside a section of your sketchbook for designs that lend themselves to sgraffito or mishima applications. Think of shapes and forms that could be used for this type of surface decoration, and sketch various ways the design could be arranged on the piece. Consider using these ideas for works in a series.

Rubric: Studio Assessment

4	3	2	1
Design Elements Use of design line, pattern, color, contrast, balance Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design	Shape of plate Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design	Unity of overall design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design	Choice of style Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design
Media Use Mishima AND sgraffito techniques, contrasted on rim/interior Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design	Form/Function Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design	Form/Function Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design	Form/Function Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design
Work Process Research Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design	Sketches Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design	Reflection/Production Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design	Documentation Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design Use of incision, pattern, and color to create a cohesive design

Teacher's Edition, Chapter 5: Surface Decoration, Studio Experience.

How to...

Make a Spout

You can create spouts for flasks, teapots, or coffee pots. It is wise to throw a few extra spouts because some spouts fit better than others.

- Throw a small, wide-based cylinder (about 1–1½ lbs.) with a narrow neck, using one finger on the inside to pull the wall upward. You can use a damp sponge on the outside to help smooth the pull.
- Alternate pulling with collaring. Finish the lip with a slight outward curve. Smooth the edge with a chamfer or fine sponge. Allow the spout to stiffen. Mark the spout location on the pot. Place it high enough so that the top of the spout will be higher than the liquid inside when the pot is filled.
- When the spout dries to leather-hard, position the spout on the mark you made. You may need to angle the spout's base so it will conform to the shape of the pot.

Fig. 4-30. Notice how the artist repeats the protruding ring design on this vessel's body and spout. How would you describe the expressive quality of this piece?
Student work, Amanda Fry, October 2000. Wheel thrown, cone 05 white glaze, parts assembled.

Handles

Handles can be functional or decorative. For example, in the twelfth century, Cistercian monks in England made vessels with multiple pulled handles that rounded the neck and shoulders of the pot. The handles were purely utilitarian; if one handle broke, another was available—as long as one handle remained, the vessel was still useful.

Handles may be pulled, coiled, or thrown. Consider the following when planning to make a handle:

- Will the handle function as a handle or will it be merely a decorative attachment?
- If it is functional, how will it work? Will you grasp it with the whole hand or just a few fingers?
- If it is decorative, will you place it on the side, shoulder, or neck? How many handles do you want to create?
- Think about the negative space inside the handle's curve. Does it complement the shape of the pot?

Fig. 4-31. A pulled handle gives the impression that it has emerged from the pot. What features on this handle implies that it was pulled?
Student work, Lisa Winkler, October 2000. Cone 05 throwware, thrown, with added handle.

Making a Pulled Handle

Each handle is unique, so you may want to pull many handles in order to have a wide selection. Keep a few extras on hand in case the first one doesn't fit.

- Wedge about 2–3 pounds of clay and shape it into a short, fat coil.
- Grasp the coil in one hand and hold it so that the coil hangs down.
- Encircle the top of the coil with your hand, your thumb facing you. This hand will remain stationary while your other hand pulls.
- Under the holding hand, make a ring around the coil with the thumb and forefinger of your other hand (this will be your pulling hand).

Fig. 4-34. Why are log handles on this serving tray the best type of support for lifting this tea set?
Student work, Vicky Day, Fine Lines Pottery, 2000. Wheel thrown, unglazed, fired in cone 10 reduction.

Student Book, Chapter 4: Thrown Forms, How to.

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