CERAMIC SCULPTURE

Activities for Elementary Grades 4—9

The following activities are designed for students from grades 4-9, although many can be used by both younger and also by older students.

EXPRESSIVE FORMS

Objective: Students will demonstrate an understanding of expressive form by altering and decorating a cylinder in an expressive way.

Materials: Clay, rolling pins, modeling tools, cardboard tubes, cutting tools such as dissecting needles or bamboo skewers, ware boards, glazes or paints

Show the class the slide of **Coast** and discuss some of the ideas and inspiration for Ms. Allen's work (see biography). You may also want to include other expressive pieces such as Joseph Germaine's **Pua'a Papa'a**.

The have students make a cylinder at least 12" high. (Use directions under cup making, p. 74.) The cylinder should express an emotion or idea. Students will alter the cylinder by cutting pieces out, cutting and rejoining, adding on, scratching in designs, and creating texture, etc. Encourage students to explore the possibilities. (If they haven't worked with clay much, you may want to have them experiment with oil-based clay or with small slabs of pottery clay before they begin their projects.) Also encourage students to consider the elements and principles of design as they work on their expressive cylinders.

When the cylinders are dry, fire them to bisque temperature. Students can paint or glaze the cylinders. When the cylinders are finished, display the cylinders and have each student talk about his or her cylinder and critique it in terms of the assignment. (Does the cylinder express what you wanted it to? Is the cylinder interesting? How do the elements and principles of design, as demonstrated on the cylinder, help the expressive quality of the piece? How do you feel about the finished work?)
Younger students may do better with a smaller cylinder.

Extension: After students have completed the previous activity, assign them to create a sculpture using the slab technique. If you have already taught your students other techniques such as coiling or modeling, give them the option of using whatever technique or combination of techniques they wish. (See directions for pinch pots, which can be used as the base for a sculpture or can be put together or added onto forms made using other

techniques.) Students should sketch at least three different ideas, choose their favorite, and refine the sketch before beginning.

COIL-BUILT CERAMICS

One of the oldest forms of handbuilding known is coil building. Start with a small, open pinch pot (see directions for pinch pots) the size of the diameter of the piece's base. Form coils by slapping clay first into a ball shape and then slapping the clay into a long oval. Then roll the clay between your hands or on a table, working from the center out and gradually thinning the coil until it is the appropriate thickness. (How thick the coil should be depends on the project and on how you will attach the coils to each other, but the basic thickness is about the size of your finger.)

Score and slip the top of the pinch pot and the bottom of the coil, then lay the coil around the edge. If you cut the ends of the coil on an angle, the joins will be stronger and less noticeable. When you have two or three coils on, use your fingers or a rib to smooth the coils together. Or, wait until all the coils are on before smoothing. If desired, leave the coils alone on the outside except for smoothing the joins where new coils are added; and smooth just the inside, so the coils become a major design element. To make the pot strong, move some clay from one coil to the next by pulling the rib up the inside of the pot, gradually working a layer of clay into a smooth sheet on the inside of the pot. Use your other hand to gently support the pot on the outside. This process will tend to swell the pot out unless done carefully, with the pot well supported by your outside hand.

Continue to add coils and smooth the inside (or inside and outside) of the pot until it is the desired height. Shape the pot as you go by placing coils right on top of each other for a straight section, just to the inside of the last coil to narrow the pot, or just to the outside of the last coil to make the pot swell. You may want to narrow the end of the last coil to make the top even. This coiling process is how many Native American pots are made.

In between work times, cover the pot with a plastic bag. If the lower portion of the pot stiffens somewhat, it will be easier to continue to build on it, but the clay shouldn't ever get past the leather hard stage. If the top coil gets a little stiff, place damp paper towels over it and leave for several hours or a day.

Ways to Use Coils

Instead of just layering the coils one on top of each other, make the coils into small designs, and build the pot in sections of designs. Or, make the coil shapes into slabs, joining one side, then assembling when slabs are leather hard.

If the work is allowed to stiffen periodically, very large pieces can be coil built. Using large coils will allow you to build more of the piece at once, but using small coils will result in a very light finished piece. If desired, coils can be joined by pinching instead of by smoothing. In addition, separate sections can be built, allowed to reach the leather-hard stage, and assembled. The difficulty with this approach is making the pieces the right size and shape: plan the design well before you start, and measure carefully, templates can help.

Coil building is a good way to create sculptures. Draw the design from several angles before beginning, otherwise, the sculpture is likely to be awkward looking and/or boring, following the shapes that come most naturally when coil structures are smoothed--saggy curves.

Another way to use coils is to make fat coils--1" thick. Make a cylinder, joining and smoothing the coils as you go. Then use an oval smooth rock or a rounded piece of wood and a fabric-wrapped board for a paddle. Hold the round object on the inside of the cylinder and hit the outside of the pot with the flat of the paddle. Move the object gradually around the inside of the pot, stretching the cylinder into the desired shape and thickness.

ART APPRECIATION--Drawing

Objective: The students will understand how artists use what they see to create their works of art.

Materials: Slide of Andy Watson's work. Slides or pictures of various ceramic sculptures and/or clay objects (choose some from different periods of history, especially if they have

a unique style and are not just copies of a natural object.) several pieces of paper and a pencil for each student.

Show the slide of Mr. Watson's art and tell the students that he gets ideas for his work from things he sees in nature. Discuss what things in nature may have influenced this work of art. (Encourage the students to look beyond the obvious.) Show the other slides or pictures one at a time and discuss what the artists may have used from the world around them to create the work of art. Also discuss what changes the artists have made that make the art different from the natural object. Talk about these changes and why artists might make them. (Remind the students that even objects modeled to "look like" real objects aren't real. For example, how many of them have seen a roller or potato bug, that's 12" high?)

Ask the students what kinds of things a person would need to notice about an object to use it in a work of art. Discuss the value of looking more carefully at the world around us and how that care might influence our lives.

Ask the students to draw an object (of your choice) on a piece of paper such as a dog, a flower, or an airplane, etc. Then show them a picture of that object and discuss the various parts and the relationships of each part to the whole. For example, the size of the dog compared to the length of the legs and tail. The length of nose and shape of the ears, etc. Then have them draw the object again and compare the drawings. Next, have them use some of the characteristics of the object to make a unique drawing of their own. Be sure to stress that it should not look like the real object, but that it should reflect things about the object they like or feelings they may have about the object. Talk about which of their drawings they like the best and why.

Ask the students what they have learned about what artists see in the world around them and how this vision influences their art.

CERAMIC FORMS--the Hand

Objective: To have the students use the hand as a shape to create a useful object ade f clay.

Materials: clay (use a low-fire clay such as MCW), waxed paper, wire to cut clay, rollers, rulers or boards that have a 1/3" high side, table knives or other objects to cut clay, toothpicks, and a kiln

Show the slide of Andy Watson's work and read the biography. Discuss how the clay object he created resembles something in nature. Ask the students if their hands are something found in nature. Have the students look at their hands and see how many different kinds of shapes they can create with their hands. See if they can think of some useful objects they could make out of the shapes they can form with their hand. (such as a coat hooks, candle holder, door stop, pencil holder, etc.) Explain that they are going to make a clay hand shape and then form it into a useful object.

Procedure: Give each student a piece of clay (slice off about 1" thick slabs from a 25 lb. block of clay and cut each slab into thirds) a piece of waxed paper, two rulers and a roller (students can share everything but the clay and the waxed paper.) Have them roll the clay out on the waxed paper between the two rulers to make a large enough slab to cut out their hand shape, and then use the table knife or other cutting tool to cut around their hand. Then they can peel the excess clay away from the hand print. Use a small sponge or a moistened fingertip to smooth the edges of the slab hand. The students will then form their hand shape into the desired object. (If they make a coat hook or towel hook or something that will need to be attached to the wall, make sure they put screw holes in it while the clay is wet.)

The students can use the toothpicks to decorate the clay and write their names. Let the clay dry slowly on the waxed paper. Cover wet clay with a damp paper towel to aid in this process. When completely dry, fire the pieces in the kiln at the required cone temperature for the clay used.

When fired, the objects can either be glazed, if glazes are available, or they can be painted with tempera paints and sprayed with a clear satin spray paint or ceramic sealer.

SCIENCE--Structure of Flowers

Objective: To have students understand the structure of a flower by making it with clay. (oil-based clay or non-firing clay works fine for this activity)

Read Andy Watson's biography to the students and discuss how forms in nature can influence an artist. Discuss what kinds of things about objects in nature an artist may need to notice. Ask students to draw a flower. Then show them a picture of a flower and have them draw the flower in the picture. Discuss what kind of difference it made to be looking at the picture. Discuss the characteristics of flowers in general.

Explain to the students that they are going to create a clay flower from the inside out to help them understand that flowers have certain shapes based on their composition.

Choose a flower that is not too small and delicate in nature and show the students a picture of the center structure. Have them make this shape with their clay. Look at and discuss the shapes that are around this center structure. Have the students create and attach clay shapes that resemble these shapes. Continue the process until the entire structure of the flower is complete.

Discuss the visual and artistic quality of the clay flowers the students have created and whether the knowledge they have learned could help an artist to do better work. (You may want to show them the slide of **Irises**, by Gary Price, from the Sept. 1998 packet, The Elements of Art.)

Optional: Discuss what value this activity has, how it may affect a person's ability to "see" the world better, and whether the students think what they learned may help them in any other area of learning.

ART--HISTORY OF POTTERY

Objective: The students will research and write a report on the history of pottery or on a specific type of pottery. They will present these reports to the class or will hand in written copies.

Show the class the slide of Joseph Bennion's **Shino-glazed Large Bowl**. Show some other handmade ceramics as well. Discuss, using ideas from QUESTIONS FOR LOOKING. If possible, have someone come and demonstrate how to make pottery on the wheel, or, take your students on a field trip to a local school where wheel thrown pottery is taught or to a local potter's studio.

After the introduction to the subject, assign or let students choose from a list a topic to research and present a short report to the class. Or you may wish to have students hand in a short written report. Some possible topics are listed below:

Wheel-thrown pottery--basic history, kick wheels, electric wheels
Handbuilt pottery
Navajo pottery
Maria Martinez
Hopi Pueblos
Greek ceramics
Roman ceramics
Prehistoric pottery
Anasazi Pottery
Hopi pottery
Japanese pottery
Wood-fired pottery
Salt-glazed pottery
Early American pottery
Bernard Leach and Shoji Hamada
The St. Ives Pottery
British Pottery
Contemporary Art Ceramics

Older students can research and write a report comparing two kinds of pottery or can trace the effects of one type of pottery on another. For example, trace the effects of Bernard Leach and Shoji Hamada's work on modern ceramics. See the internet for information. One place that tells what information is available is The Clay Turtle Bookstore's web page. Students could also compare two or more individual works.

USING HUMP MOLDS TO PRODUCE BOWLS

Objective: Students will learn to make pottery using hump molds and will make a bowl using this technique.

Show the class the slide of Joseph Bennion's **Shino-glazed Large Bowl** as well as several ceramic items made using other techniques besides the wheel. Briefly discuss the advantages and disadvantages of several of the techniques. Also discuss considerations for pottery which will be used for food. Then introduce students to hump molds. Professional hump molds are generally made of a substance like plaster that will absorb water, so the molded clay can be easily removed from the mold. You may be able to borrow some of these, but if not, other items will work. Plastic or metal bowls and large smooth rocks make good molds for bowls. Because they won't absorb water like plaster, these molds need to be coated with several layers of paper. Tear paper (the tough paper towels commonly used in schools work very well) into strips, dampen slightly, and make several layers over the mold, alternating the direction of the strips like for papier-mâché. (If you plan to do this activity with several classes, you may find it worth your time to make, or have the students make, hump molds by casting plaster in a variety of curved objects.)

When the mold is ready, the students should roll out clay into an even slab (See directions for making slabs). The slab is then carefully draped over the mold. Excess clay can be gradually worked in as the clay is molded over the surface of the mold. Using a needle tool, then cut an even edge around the draped clay, which will become the edge of the bowl. To make a surface for the bowl to stand on, students can use a paddle and flatten the very bottom of the bowl, or, make a coil of clay into a circle, place it gently on the bottom of the bowl, trace around it lightly with a pencil. Remove the coil, scratch the area inside the tracing, add enough water to form slip (water and clay mixed to the texture of paste), scratch the underside of the coil, dampen it, place the coil back on the bowl, gently press the coil in place, and blend some clay from the inside and outside of the coil into the bottom of the bowl. (See closeup, below)

Allow the clay to harden slightly (if the clay is left too long, it will shrink enough to stick or even to crack), lift the mold and bowl, and turn them over carefully (students may need to help each other with this step), or lift the bowl off the mold if the mold is heavy. Place the bowl squarely on the coil (called a footrim) and smooth the rim of the bowl using a small damp sponge, a damp strip of leather, or a moistened finger tip. Cover the bowls and allow to harden overnight. In the morning, or as soon as they're stiff enough to handle, turn the bowls over and cover loosely. Allow to dry slowly. (Turning the bowls

over helps prevent the rim of the bowl drying so much faster than the base of the bowl that the rim cracks.)

Bisque fire the bowls. Buy only food safe glazes for this project. Students should dab glaze on in three coats, going a different direction each time. No glaze should be put on the footrim, but glaze can be put inside the footrim (the glaze inside the footrim provides a more equal pressure on the clay bowl.) Check each piece for glaze coverage and fire. Have students write a critique of their work. If possible, use the bowls during class, then display the work.

AESTHETIC THEORIES

Objective: Students will demonstrate their understanding of aesthetic theories by discussing and classifying artworks according to which theory they best fit.

Show the class the slides from this packet. Ask students to choose which of the following aesthetic theories is best represented by each artwork.

Mimetic--art should look real, mimic nature.
Hedonist--art should give pleasure to the artist or the viewer.
Formalist--art should be evaluated by the formal properties of composition, color, line, value, etc. (The elements and principles of art)
Instrumentalist--art is an instrument to bring about change.
Expressivist--art expresses an idea, feeling, or emotion.
Marxist--art is propaganda, designed to sway or promote a political opinion or cause.
Institutionalist--If it is in a museum, a gallery, or approved by the art world, it is art
Neo-rational--if it contains the same properties as an accepted work of art, it is art. (If A is a work of art which has X & Y, and B has X & Y, then B is also a work of art.)
Feminist--women have a unique perspective that is expressed in their work. (contextual, the environment in which an artist exists affects the art she creates.)

If you haven't introduced these theories to the students, do that first. It would be helpful to have examples for the students. (For younger classes, you may want to limit the number of theories you talk about.) Some examples of artwork from SMA's Elementary Poster set (EP) and from SMA's Middle School Poster set (MSP), are listed below. Many of the slides from past Educator Evening Packets will also work.

Mimetic--(EP)Cyrus Dallin's Paul Revere, Portrait of John Hancock, etc., (MSP)Carel Brest van Kempen's Lizard Relay
Hedonist--(MSP) Lou Jene Carter's Mostly Flowers
Formalist--(EP)Don Olsen's Chelsea VI, (MSP)Raymond Jonas' Abstract Configuration
Instrumentalist--(EP)Mahonri Young's The Factory Worker, (MSP) Lee Greene Richards' Dreaming of Zion
Expressivist--(EP)Birger Sandzen's Moonrise in the Canyon, Moab Utah, (EP)Trevor Southey's New Bloom
Institutionalist--(EP)Doug Snow's Cockscomb, near Teasdale

Neo-rational--(EP) Edith Roberson's Channel Three
Feminist--(EP)Jeanne Clarke's Entertaining Ladies II, (MSP)Jacqui Biggs Larsen's Cottage Industry

Show the class examples of various artworks and have them decide what aesthetic theories each fits. Then show the class the slides of the ceramic artworks from this packet and ask them to decide what theory each artwork best fits. To keep the activity simple, just have students choose the best answer for each piece and then discuss their choices and the reasons for those choices. Many art works can fit several theories, depending on the viewer's response, and sometimes, based on the viewer's knowledge of the artwork and the artist.

For an older class or one experienced with aesthetics, or for a longer activity, have the students choose what percentage of the artwork is represented by which theory. For example, a student might decide that James Christensen's Rhinoceros is 20% Expressivist because it illustrates an important idea the artist wants viewers to think about--a dilemma similar to many we face; and 10% Formalist because of the effective use of design elements and principles; and 10% Mimetic because the Rhino looks fairly real and the floor tiles use correct linear perspective; and 60% Hedonist because it's a fun, fantasy artwork. Ask the students whether the ceramic sculpture is different from other kinds of artworks as far as aesthetics are concerned.

ART and SOCIAL SCIENCE--MASKS

Objective: Students will explore specific uses for art by learning about and making masks.

Show the class the slide of Joseph Bennion's **Shino-glazed Bowl**, Catherine Kuzminski's **Kimono Teapot**, Cyrus E. Dallin's **Paul Revere**, and **Portrait of John Hancock**, and others. Ask students to name some of the ways art is used. (For example, functional--dinnerware, decorative, expressive, to honor someone, to help us remember them--a portrait, etc.) Then show them photographs or slides of art used for rituals, such as masks, ancestor figures, etc. Next, ask the students to name all the ways masks are used. (Religious or cultural rituals, celebrations such as Halloween and Mardi Gras, theater, movies, as disguises, etc.)

Then concentrate your presentation on the particular area you wish to focus on with masks. (See also masks) Some possibilities follow:
Native Americans--North West Coast, Inuit (Eskimo), Iroquois, Navajo, Hopi, Zuni, Apache
African
Polynesian
Asian
Theater--Japanese, Greek, Medieval, Mystery plays, commedia dell'arte(16th C. Italy), modern American, children's, puppetry, Chinese Opera, minstrels, mummers, and mimes, masques

Decorative
Death and burial masks
Protective--motorcycle, dust, gas, respirators, surgical, etc.
Symbols
Shamans or sorcerers
Movies
Seasonal and ritual ceremonies
Carnivals--Mardi Gras, Brazilian Carnival, European Carnivals
Disguise
Artworks--wearable art, expressing ideas or feelings, spirituality (such as in postmodernist art), found-object sculpture, etc.
Self-discovery
Celebrations

After your presentation, if desired, assign students to research further information. Then introduce the maskmaking portion of the activity. Have items suitable to your chosen emphasis available. You may want to assign students to find and bring appropriate items from home. Several kinds of masks are explained below, but many other kinds are possible. (See Resources for additional help.)

Ceramic Clay Masks

Supplies: ceramic clay, approximately 2 lbs. per student.
tools for cutting, shaping, etc. (See supply information)
heavy material, pieces of cardboard or hardboard for each student
acrylic paint and spray-on sealer or ceramic glazes
beads, feathers, leather scraps, material, paper, found objects, etc.

After completing the historical portion of one of the suggested approaches, have students make their own masks. Structure this part of the activity so it enhances the learning of the earlier section. (For example, the students can make ceramic half masks, which cover only the upper half of the face, or masks that represent the spirit of an object or a specific animal, or masks a shaman might wear, or masks which represent an ancestor, or masks for a theater production, see Extension, below.)

To make the masks: If you have purchased clay in bags, cut a 1" thick slice for each student. Before beginning, students should sketch at least three possible designs. Have the students evaluate the designs for the criteria you have established. Once students have decided on a design, they can roll or pat their slab of clay into a 1/4" 1/3" slab. (If masks are to be worn, weight will be a factor, and may dictate thinner masks, but thin clay breaks easily. Half masks could be used during a play--just held in front of the face.) Using a cutting tool, students should cut the shape of the outline. Then use a small moistened sponge or a damp fingertip to smooth the cut edge. Features can be cut out or added on. Discourage students both from using small, delicate pieces, which rarely stay on and also from cutting out so much that the mask can break apart. No part of the main mask should be smaller than 1/4".

Attach additions by scoring (scratching into the surface of the clay) and slipping (adding enough water to the scored area for it to form clay "paste") both the piece to be added and the spot it will be added to. Do not attempt to add things like hair or ears by butting the edges together--they won't stay. Instead, score and slip and overlap the additions onto the base part of the mask, and smooth the excess clay into the back, stamp the join; or simply score and slip well and press the piece on with fingers or a flat object larger than the addition.

Features can be built up with one or more layers of the slab, or can be molded and then attached. If any areas are very thick, students should allow the mask to harden somewhat--so the clay is the pliability of heavy leather--and then carefully scoop out excess clay from the back of the mask using a loop tool. (Thick clay can be successfully dried and fired, but the drying and the early stages of the firing must be very slow to prevent cracking.) If any features are created by cutting sections out, they should have the edges smoothed. The mask can be given some curve by placing it over crumpled layers of newsprint. When designing and creating the mask, students can plan ways to attach objects to the mask after it has been fired. For example, holes around the hairline allow raffia, string, yarn, rope, or fabric strips to be attached for hair. Holes in the ears can be attachment spots for small objects as earrings, and holes above cut outs for eyes can have beads strung in them to be eyes.

Students also should create some way for the mask to be displayed or used. Two holes, one on each side, with wire, sturdy twine, or a leather thong strung between works well. So does one centered hole, or a small piece of clay attached to the inside near the top, with an indentation that will hook on a nail or dowel. Other, more decorative ways are also possible as is a small support for table display.

Encourage students to incorporate texture in the surface of the masks. (See Sept. 1998, The Elements of Art packet, Gary Price Activities, for suggestions for teaching and creating texture.)

When the students have completed their masks, allow them to dry slowly and then fire them. Students can paint the masks. Again, have students make preliminary design decisions by sketching their masks and trying colors with crayons. When the paint is dry, spray the masks with nonglossy sealer. (Make sure you do this in a well-ventilated area--outside, if it's not too cold.) The sealer drys quickly. Beads, feathers, and other ornaments can then be added. Display the masks with
appropriate historical information and visuals, or use the masks in an appropriate activity. Students should write a critique of their mask using the critical model you use in class. Even first graders can do this.

Variation: For masks which look like the maker, first, have the students make a pinch pot (see directions for pinch pots) about the size of their face. Then they need to coat their face with Vaseline. Next, they carefully press the clay to their face. (They will need air holes for the nostrils.) Students probably need to do this activity in pairs so they can help each other. The clay should be gradually worked around each feature. When the clay has

been sufficiently molded, it should be gently and carefully removed. Any distortions that happen during removal can be fixed, or, the mask can be deliberately distorted to produce a face similar to the student's but more expressive or of a different age. When the clay is leather hard, additions can be made. Finish the masks the same as for slab-built clay masks. These masks can also be used as molds. (See Resources for instructions, or get help from someone experienced at maskmaking.)

Stiff Paper Masks. Use stiff paper for the mask base. Cut out exaggerated features from colored paper or poster board and glue on. Add beads, feathers, small found objects, or lightweight material.

Plaster Gauze Masks. Buy plaster gauze bandaging. You will need one roll per mask, although if making a lot, the leftovers will be enough for a couple masks. (Because this plaster has mostly gone out of use, it can often be gotten very cheaply or even for free. Try Army/Navy type stores.) Students having masks made should pull their hair back away from their face with a headband of some kind and/or put a shower cap on and wear a garbage sack with a hole cut out for their head to protect their clothes. Then they should apply a generous layer of Vaseline to their face. Cut short pieces of the gauze, in various sizes, 1/2" to 1-1/2". Moisten gauze strips in warm water, and squeeze extra water out. Lay the strips, one at a time, on the face, pressing the strips into the contours of the face, rubbing lightly, so each strip sticks in place. If the gauze is carefully applied, the mask will be accurate.

Overlap the ends of the gauze strips until the face is completely covered, leaving a space at the nostrils and the edges of the closed eyelids. (Eyes can be open or closed, as can the mouth, but these must be determined before gauze is applied to those areas.) Make sure the mask stretches under the chin slightly, so it doesn't look like the face is slightly cut off. Add a reinforcing layer of strips around the edge of the mask. When plaster has set up, about 15 minutes, have the sitter move his facial muscles and then gently pull the mask away, starting at the forehead. (A hair dryer can be used to dry the mask more quickly.)

When the mold is completely dry, hold it up to the light to check for weak spots. Anywhere the light is visible need reinforcing. Apply moistened strips to the outside of the mold. Rub a white, clear-drying glue into the moistened gauze and cover the outside of the mask with overlapping layers. Allow to dry completely, and paint the inside and outside with polyurethane or acrylic medium for protection.

The finished mask can be decorated with paint as well as with anything you can attach. Or, the mask can be used to make plaster gauze casts. To make casts, simply put a layer of Vaseline on the inside of the mask, and line the mask with small overlapping strips of moistened gauze, just as when you made the original mask, except this time the gauze is on the inside. Remove the mask and let it dry completely, finish with paint and or found objects and materials, or combine the mask with other shapes to make an art work. (From Carole Sivin's Maskmaking)

Fabric Masks
Buy stiff cloth Halloween or theater masks and have the students decorate them. They can glue and sew beads, sequins, feathers, gauzy material, net, paper, felt, etc., onto the masks.

Other simple methods for making masks are papier-mâché, paper bags, paper plates, buckram, wire, wire frames covered with paper strips, material, or found objects. Other kinds of masks are also possible. For example, see transformation masks in the Crayola DREAM-MAKERS teacher booklet *Tales To Tell*, 1996.

Resources:
Sivin, Carole. Maskmaking Davis Publications, Inc. Worcester, Massachusetts: 1986 (This book contains good directions for many different kinds of masks)

Casey, Kevin K. Masks. Rouke Publications, Inc. Vero Beach, Florida: 1996 (A children's book from the "Customs, Costumes and Cultures" series. Has excellent historical information on a child's level about 14 kinds of masks with at least one picture for each type.)

Internet--I used AOL and got the best search results using **masks and art**. A few good sites follow:
http://www.huichol.com/ (Great images of beaded masks from Mexico (traditional Huichol) with some explanation and history. Also has sculpture.)

http://www.wiu.edu/users/mfwc/wiu/form,html (Cast paper masks. Good images, describes process.)

http://www.alaskagifts.com/masks.html (Alaskan native (Inuit) carvings, masks, sculptures.)

www.coastalimports.com (African Art. Good images, variety, lots of masks from different tribes. They sent me a color catalog with nice pictures, about three days after I asked for it--all you have to do is click on a button and type in your address.)

Extension--Drama: Use an already written children's play, or have the class write a play or dramatic presentation which relates to your area of focus. For example, a play about various animals with masks that represent the animals or their spirits; a play based on a Greek or Roman myth; a play which involves Mardi Gras or another carnival, a traditional-style Oriental theater play. The possibilities are endless.
Older students can do the same activity, using a longer play, if desired.

Extension--Language Arts: Link masks to a study of character in literature and writing. Have students make masks to represent (they don't have to look like the person or animal to represent them) a person or animal in a story you have read. Or, have students write about a mask they have made or write a description of a character and then make a mask

to represent that character. Use the masks in a readers' theater production for your own class or invite other classes to the performance.

DESIGN

Show the class the slides of **Shino-glazed Bowl** and **Kimono Teapot**. Ask the students whether they think the ceramic pieces were intended to be used or not. Then ask them why they feel that way, and what information would help them determine what the artist had in mind. (Decoration, whether the glaze is food safe, size, etc.)

Talk to and discuss with the students the relationship between design and function. Assign the students to bring items to class such as dinner ware, utensils, etc. Have the students examine their items and determine whether the design suits the function of the object. Then have students take turns explaining to the class what they have determined about their item and why.

SMALL LIDDED BOXES

Give each student a lump of clay that fits comfortably in his or her hands. The students should slap the clay into a ball and then, by slapping with their hands and/or slapping the clay ball onto the table (not too hard), shape the ball into a
smooth rock-shape. The bottom of the shape should be patted on the table enough to give it a non-tipping flat surface. Allow the clay to set somewhat and then use a cutting wire to cut through the shape about 2/3 of the way up. The cut should not be straight, see below.

Then allow the clay to get leather hard. Take the two pieces apart and, using a loop tool, carve out the inside until only 1/4" sides are left (see illustrations, above). Then roll out a coil as long as the circumference of the box. Flatten the coil into a long slab and cut to size--about 1/2" x the inside circumference of the box. Score and slip the lower half of the slab and the top 1/4" of the inside of the box. Attach the slab to the box with 1/4" of it sticking above the lower edge of the box, (see illustration, below). Smooth the join in the slab, and check the lid to see that there is a 1/4" straight edge for the lip to fit into. (If the lid is too shallow, put the flange on the lid instead of on the bottom of the box.)

Carefully put the lid on the box, and allow it to dry partway. Then take the lid off until the box is completely dry. Bisque fire the box. Either paint or glaze the box.

When glazing, be careful not to get glaze on the edges of the lid and the bottom where they touch or the box will never open. Avoid using shiny glazes, which can run and seal the box shut.

ARTIFACTS AND RELICS

Materials:

- some type of modeling material (clay, sculpting wax, oil clay, sculpey, Model Magic, papier mâché, etc.)

AND/OR

- found objects to make assemblages (students should be encouraged to find their own found objects to assemble). Examples: broken plates, cups, wheels, action figures, "happy-meal" type toys, hardware, clean organic refuse, etc.
- strong bonding glue or cement, like epoxy resin
- spray paint
- sandpaper
- wire and wire cutters

Show the class the slide of **Faith and Desire**, by Brian Christensen, and discuss, using QUESTIONS FOR LOOKING. Then do the activity.

Create an artifact or relic from a modeling media or by assembling found objects together in unusual or unique ways. Think of ways you can alter your objects' surface texture or color. Or, create a narrative piece. Tell a story with your piece (Using pictures, written information on your piece, or more enigmatically by the forms and textures you choose to include in your piece). You can show what your piece was used for by your creation of its form (does it come with an instruction manual?). You can show where the piece has been through its outside "wear," texture, etc. (question. . . You can tell) where your mail came from and how it was handled by looking at what features? Share your pieces and stories with your class at the end of the project.

LANGUAGE ARTS--WRITING

Write a fictional story about the origins of your piece (if you made a piece of your own),

or of Brian Christensen's piece. Where did it come from? How was it made? What are its uses? Where has it been? Who has been its owner(s)? Who has it now? Etc.

BIOLOGY

Reptiles (snakes) Use the slide of **Faith and Desire** to spark interest in a lesson on reptiles, particularly snakes. You also may want to use the poster of Carel Brest van Kempen's **Lizard Relay** from the SMA Middle School Poster Set.

GEOLOGY

Clay (Where to find it, what it is made of, how it is formed, etc. See Origins of Clay)

CHEMISTRY

The stages of clay and how its properties change with heat (wet/greenware, bisque, fired, and glazed)

ARCHEOLOGY AND UTAH HISTORY

Brian Christensen said that volunteering on Saturdays screening dirt from an archeological dig affected his creativity as an artist more than anything else when he was young. His autobiography at the beginning of this lesson talks about California history and the history found in the layers of soil on that particular site.

Find a local archeological site (like Camp Floyd) and see if your class can take a field trip or help screen dirt after school or on a Saturday. Or, see if you can bring in a bucket of dirt to class to screen to see what is found. Discuss artifacts and how they help us determine history, culture, philosophy, etc. of a people.

Find a local archeologist to be a guest speaker.

SLAB VESSELS

Objective: the students will learn to create a vessel shape using clay slabs. The students will demonstrate their understanding of texture by texturing the vessel.

Show the class the slide of **Kimono Teapot** as well as reproductions of some other items made from clay slabs, or, show them some actual pieces. Briefly discuss, using QUESTIONS FOR LOOKING. Explain how to design a clay slab piece and give students time to draw their ideas. After they have drawn at least three ideas and chosen their favorite, they will need to figure out what shape and size of slabs they will need. This part of the activity is good geometry practice. Older students will be able to measure slabs using a ruler. Younger students can use pieces of construction paper that have been folded and cut to an appropriate size. For example, a rectangle made by folding an 8-1/2" x 11" sheet of paper into fourths makes a good size for a box.

For tube shapes, the students can trace a circular object, measure around the outside edge of the object with twine, and then cut a rectangle the length of the twine plus 1/2" overlap, using a ruler just as a straight edge. (Or, see Make a Great Cup)

Have students cut their patterns out of construction paper to check the pattern really makes the shape they want. When they are ready, have each student roll or pat out the slabs and cut them to size. Slabs can be textured now, can have texture added after they are assembled, when leather hard, or students can do a combination. Some ways of creating texture, such as with stamps, must be done before the clay is too firm, and any method that distorts the slab should be done before the final cuts are made. (The shapes of the slabs can be lightly marked with the end of a not-too sharp pencil to guide placement of the texture/design.)

The slab pieces also can be decorated with glazes. Limit the number of glazes used to prevent the all-too-typical unattractive glop of too many glazes. One good method is to give students a base color and two main decorating colors with a few neutrals available for everyone. Students also can be required to sketch out their intended designs. Have them do at least three, choose one, and make at least one improvement in it.

Some helps for designing slab pieces:
When making a square box, cut each side the same size and assemble them by lapping each side over the edge of the last side, see figure 1. below. Rectangles can be made the same way, or the two short ends can be set inside the long sides, figure 2.

Figure 1. Figure 2.

Students will need to decide how the sides will overlap and how thick their slabs will be before figuring the size of the bottom of their slab piece. For example, Figure 1. needs a square with sides which measure the length of one side of the box plus one thickness of the slabs, and Figure 2. needs a rectangle with two sides the length
of the long sides of the box and two sides the length of the short side of the box plus 2x the thickness of the slabs.

For a young class, have students make all the same shape, such as cylinders. Then all they have to calculate is adding enough length to provide an overlap when the slab is cut on an angle. To cut the slab, see Figure 3., the side view, and Figure 4., how the ends overlap when the slab is made into a cylinder.

Figure 3.

Figure 4.

Making clay slabs:

If you have purchased bags of clay, use a cutting wire and slice off 1" (or whatever is appropriate for the items students are making) thick slabs from the clay, so the students start with a shape similar to what they will use. Or, cut squares of clay. Students should have decided what shape and size the slabs for their project need to be. The easiest way to start is to pat the clay into a fat slab. Then students can continue to pat the slab thinner or can roll the clay out. Give each student a piece of heavy material such as canvas or denim to work on. Demonstrate rolling slabs and also, if the students can read, write a version of the following directions on the board or a large sheet of paper so the students can refer to them.

Place the clay on the material between two 1/4"-1/3" high, thin boards. Carefully roll the clay from the center out, making the pressure even, and gradually thin the clay until it is even with the two guide boards. Keep the rolling pin on the guide boards so the clay will not get too thin, see Figure 5. Handle the clay as little as possible, although you may carefully turn the clay over once. This helps equalize the pressure and stretching of the clay and produces a slab which stays flat.

Figure 5.

When the slabs are rolled out, they are cut to size, and then they should be allowed to dry to the leather-hard stage. When the slabs are leather hard, they can be assembled by scratching and slipping the edges to be joined. The scratched and slipped edges should be pressed firmly together and the joints blended with a finger tip or a small tool. Square corners should be given additional support on the inside. Make a coil the size of an earthworm, lay it carefully in the inside corner and smooth it into each side of the corner, Figures 6 and 7

Figure 6. Figure 7.

Lids can be made by attaching 1/3-1/2" slabs on the underneath side of a slab which fits the top of the piece. These slabs must be slightly smaller than the inside measurement of the finished piece. See Figure 8.

Figure 8.

You also can make a lid for a rectangular or square box by putting two opposite sides of the flange in place; however, you will need to be very careful not to knock the flange pieces until they have been fired, they are considerably less stable than a box flange. Round lids will need a round slab for a lid. Draw the lid on a piece of scrap paper and then draw the inside diameter of the tube inside the lid. Roll out a long thin slab (or use trimmings). Use string to measure the length needed. Then cut the slab 1/2" longer than needed. Now cut the ends on opposite angles and join, overlapping the angled edges, as shown in Figures 3 and 4. Scratch and slip the edges to be joined, press firmly, and smooth together. Add narrow coils to support joins on the inside and smooth the edges into the sides of the corner, Figure 6. The finished joint should look like Figure 7.

The following are a few of the many simple, but interesting shapes that can be made from slabs.

When students are comfortable with slab building, they can make more complex shapes such as those shown below.

Top Views

Side Views

In addition, asymmetrical shapes can be made, see below. Use torn slabs, asymmetrical slabs, and combine slabs with coil-built additions.

(from designs by Leon Nigrosh, Susanne G. Stephenson, and Sandy Hastings, Claywork, by Leon I. Nigrosh, 1995)

For handles, make shapes that echo or are related to the shape of the body. Sometimes a contrasting shape also works. Handles and knobs need to be functional too. In other words, if you can't pick up the lid or the pot by the handle, it's not usable. (Generally, it's a good idea even for items not meant to be used, because a handle that could be used is likely to fit the size and shape of the item and be good design. However, *deliberately* making unusable handles *is* a design possibility.)

Make handles from slabs that have had the edges smoothed. Score and slip them well so they are well attached. In addition to scoring and slipping, you can press a small stamp or other object on the join. The resulting shape/texture will be an attractive design element as well as helping the handle stay attached. Knobs can be made from slabs, small balls, a slab on top of a small cylinder shape, or a combination of shapes.

Simple slab shapes also can be altered by paddling, pinching, or fluting. Start with a simple cylinder, then pinch the sides to form an oval. Or use a pinch pot and alter it. Some examples are shown below.

Use pieces of wood covered with cloth for paddles (the cloth helps keep the paddle from sticking to the pot and provides texture), or just plain wood. Support the inside of the wall with the other hand. Make attractive bowls by adding foot rims to low cylinders that have been altered and then allowed to become leather hard.

MORE SLAB PROJECTS

Using Plant Material to Create Interesting Textures and Designs in Slab-built Pieces

The technique described below can be used to create tiles, medallions, jewelry, plaques, trivets, wind chimes, or mobiles. Decorated slabs may also be made into any of the slab-built projects explained previously.

Gather dried or stiff plants or leaves with interesting shapes. Roll out a slab of clay (the project will determine the size and thickness of the slab). Position the plant parts on the slab and gently roll over them with a rolling pin or press in with a flat board. Pick the plant parts out, using a needle tool to help lift one edge, or leave the plants in; they will burn out during the firing.

Dry slowly to avoid warping. An old window screen makes a good drying rack for small slabs because air can get to each side equally. Be sure to allow the pieces plenty of time to dry. Then bisque fire to cone 6--8. When the pieces are cool, stain them. Use commercial underglazes and stains or a little water mixed with oxides such as red iron, cobalt, chrome, or rutile. Apply the stain with a brush (they will stain your hands and clothes too), making sure the stain gets into all the depressions. Then wipe across the top of the slab with a damp cloth or sponge. If you wipe too much off the first time, restain, and wipe more gently.

Allow the stain to dry thoroughly and refire to cone 6--8.

Tiles: For tiles, buy premade tiles, and have students glaze or paint.
To make your own tiles, roll out slabs and cut to size or make tile forms.

Make simple tile forms out of scrap wood. The forms will last longer if the joints have a lapped joint at the corners.

Students press the kneaded clay into the form, filling all spaces. Then pull a stick or ruler across the form, leveling the tile. Carefully use a block of wood just smaller than the inside of the form to push the finished tile out. Smooth the edges of the tile. Decorate the tiles by texturing, drawing, or by adding clay on, or wait until the tiles have been bisque fired and decorate with glaze.

Medallions: Choose a clay type that matches the effect you want to achieve. Porcelain or a white-bodied stoneware can be very delicate, while a coarser clay body will look more rustic and natural. For porcelain: Make a small ball or oval and roll it out until 1/4" or less thick. Position a small piece of plant on the slab and then roll over it with the rolling pin hard enough to push the plant into the clay. It's fine if the clay thins slightly. You may be able to pull the plant material out, but it is safer just to leave it in place. Punch a hole through the slab near what will be the top. A small tube such as a sturdy straw works best to make the hole. When the clay has stiffened slightly, gently turn it over in your hand and smooth the back of the hole.

Fire according to the directions. You can stain as explained, or, put stain only in the depressions (or wipe very well) and when the stain is dry, coat the front of the medallion with a clear glaze. Cobalt stain and a clear glaze on a white clay has the look of Delft ware. Older students can use more than one color of stain. (When using cobalt, be aware that you need only a very small amount, its coloring property is intense.)

For a more rustic look, use a coarser clay, one with grog mixed in, which will have some color even at lower temperatures. Make as with porcelain, except you may want to use an uneven hunk of clay rather than a round or oval shape. Finish according to the general directions.

Jewelry: For jewelry other than medallions--make small balls of clay the same size, and pinch one end and flatten the side perpendicular to the pinched section. Push small bits of plants into the flat portion or texture with a stamp or tool. Make the hole through the

pinched portion. Use a finger to provide support on one side of the pinched section and carefully push a tool or small tube through.

For other beads, make the hole by poking a pointed tool, such as a knitting needle, just far enough into the bead for you to see the point on the other side. Pull the tool out and push it into the bead on the other side, where the point came out. This method prevents a ripped look on one side.

Press plant material into small slabs and then carefully curl them around a pencil or small rod to make beads. Small plain beads can be made and stained to be used with larger textured beads or medallions. You can also texture beads with tools or by rolling them on textured surfaces; just leave them on the piercing tool until you're finished texturing, so the hole isn't accidently squashed.

Beads and medallions also can be made in any shape, just remember to add texture to make them more interesting. Do smooth any sharp places that might catch on skin or clothes.

Plaques: Make as for tiles except use round, oval, or uneven pieces of clay to make the slabs. You can make holes for hanging or add small balls to the top at the back. Attach the balls by slipping and scoring and then pinch the side away from the plaque so it has a surface perpendicular to the plaque. Make holes in the pinched sections. (Similar to the beads, above) Or, make some kind of stand for the finished plaque.

Trivets: Ceramic makes a great insulator. Make a slab big enough to hold a hot pan and about 1/4"--1/2" thick. Decorate using plants; fire, stain, and refire. Glue small circles of felt or cork to the back of the hot plate so it won't scratch tables or counter tops. The trivet can be scrubbed with a brush, but avoid getting the felt or cork wet. If the pieces of cork wear off, just put new ones on.

Wind chimes: Make long oval or rectangular slabs, 1/4" or less thick. Put a hole in the top of each and finish according to the general directions. Make a slab to hang the chimes from. This can be any shape that goes with the chimes and can hang horizontally, vertically, or perpendicular to the chimes. Decide on the position of the pieces before finishing the slab so the holes will be in the right places.

After firing, string the wind chime using sturdy twine or cord.

The clay can be a nice round or oval, easy to get from a ball that has been flattened and then rolled, or the clay can be an uneven piece; the natural, rough shape suits the feel and look of the plant material.

Make **Mobiles** the same way, spacing the hanging shapes so they do not hit each other easily.

Slab-built Oriental-style plates

Follow the directions for making slabs, forming the slab on a piece of sturdy material. Cut a square or rectangle of the desired size, rounding the corners just slightly, or generously, as desired. Smooth the edges of the slab. Carefully lift the slab by the edges of the material and place inside a shallow container with a contour you like. Cover the slab and allow it to reach the leather hard stage. If adding a footrim, make it now so it will also be leather hard. (See directions below) Remove the slab from the container and turn upside down, supporting the underneath side with padding of some kind that will not mar the surface of the plate, or use your hand. Attach a footrim or feet to the bottom of the plate.

A footrim can be made by forming a coil or a narrow slab into a circle. The circle can be formed by hand, around a shape drawn on paper, or on the inside of a lid, can, or other circular object. Allow it to reach the leather-hard stage. Measure where the footrim should go, and attach by scoring and slipping. Carefully turn the plate right side up so the rim will dry flat.

Another possibility is to make feet from small balls of clay. Measure where the feet will go, score and slip the plate back and one side of the ball. Push the ball onto the plate firmly, pinching the side of the ball away from the plate. Using damp fingers, shape the ball so it becomes a blunt triangular shape.

You may also use small slabs for feet. Smooth the edges of slabs that are about 1-1/4" long by 1/2" wide by 1/4" thick, and curve them slightly. Set them upright on a flat surface and allow to stiffen enough that they will retain their shape--just barely leather hard. Attach them to the back of the plate, and turn it upright. Gentle downward pressure will adjust the legs to compensate for any minor unevenness. More serious unevenness may need to be adjusted by scraping a very thin layer off the longest points.

When the plates are dry, check legs or rims for unevenness. Rubbing the plate in a gentle circular motion on a piece of sand paper will smooth the surface, if needed. Have students draw a freehand design with ceramic stains and bisque fire the plates. You may want to have some photographs of typical oriental designs to give the students ideas for design style.

Glaze the plates with a clear or sheer glaze, so the oriental-style design shows through.

The slab plates made using the previous directions can be made in sizes from a condiment size of 2" x 2", to dinner-size plates of 8 or 9" square. The plates can be rectangles instead of squares. Advanced students may wish to make a set of plates of various sizes, using coordinating glazes and designs.

DRAWING

Objective: The students will increase their drawing skills by drawing an interesting natural object.

Show the class the slide of **Roller-Bug** and discuss how the artist has used a bug as inspiration for an artwork. You may also want to show reproductions of other artworks such as Carel Brest van Kempen's **Lizard Relay** and Lou Jene Carter's **Mostly Flowers** from SMA's Middle School Poster Set, (**Lizard Relay** is also in the Nov. 1997 packet, Tales to Tell and **Mostly Flowers** in May 1995, A Feminine Perspective), and **New Bloom** by Trevor Southey, from SMA"s Elementary Poster Set (and from April 1993, Portraits in Painting) and Southey's **Johnny's Apron**, (Nov. 1994, Cultural Canvas), as well as artworks from other artists.

Have the children choose an object to draw. This should be something they can bring to class. If the students do not yet have a repertoire of drawing techniques, teach them at least one new one. If you are not an accomplished draftsman, don't worry. We know that children learn from modeled behavior. One of the most important things you can model for your students is your willingness to be a learner. Although elementary-age students want to learn to draw realistically, they learn very early to be defensive about their artwork. If you are learning along with your students and modeling behavior that teaches them it's okay to not always be really good at everything, you may provide them more help than if you're already good at drawing. Besides, if you demonstrate and work on drawing, you'll get better!

A good drawing text will be helpful, but here are a few suggestions:

Contour Drawing--draw the outside and inside contours of an object using lines that thicken and thin to show the curves. Do not look at the paper, but at the object you are drawing, moving your eye along the edge (contour) of the object as your pencil or pen moves on the paper. Try to pay strict attention to what is actually visible. Do several drawings from different positions.

Hatching--Make small lines all going in one direction. Areas that are very light will have no lines, areas that are slightly shadowed will have a few lines, and dark areas will have dark lines drawn close together.

Cross hatching--Draw small lines which cross each other to produce areas of shadow and depth. The closer together the crossed lines are, the darker the shadow.

Blending--Create smooth gradations of dark to light. Press harder and use increasingly softer (they are darker) pencils to achieve the shape. (Students will need at least three

hardnesses of pencil for this assignment. HB is a medium hard pencil, H pencils get increasingly hard as the number increases, so 4H is a hard pencil that will make a very light mark. B pencils get softer [and thus, darker] the higher the number, so 4B is a soft pencil which will make a dark mark.

Give students a specific way to judge whether the drawing is finished. For example, when the students can see 5 different values in the drawing. (7 is a good number for a blended drawing, but some of the other techniques are more difficult and 5 may be a better number for them.) This criteria establishes an ending point that is not just when the student is tired of what she's doing.

After the students have completed the drawing activity, have them choose some quality from one of the drawings they like. This quality then should become the basis of another artwork. It too can be a drawing, or it can be created in another medium such as clay.

DANCE/MOVEMENT

Objective: The students will explore how movements can grow naturally out of shapes.

Show the class the slide of Von Allen's piece **Coast**, and discuss the origins of the shapes briefly. Then talk about movement's ability to "push" or continue a shape. Tell them to imagine that something about the shape is going to be pulled so strongly that it has to respond. Have the students all assume the shape of Allen's piece. Then have them explore what they can do that is a natural result of that shape.

For example, you could stay in the same position but stretch your body so the tension of the shape is increased, you could continue the thrust of the shape up onto one foot or to the side, you could let go of the pull so the shape slumps or gradually crumples, or the curve of one arm could become so strong it pulls you to bend to the other side or even across the floor or in a circle.

Have the students choose a movement (remind them the movement can be subtle) that grows out of the shape of **Coast**. Have the class share their movements in small groups, then discuss the variety of ways movement was generated. Have them choose another shape (you may want to have other artworks to choose from) and repeat the process.

Extension: After completing the above activity, divide students into small groups. Have them find a reproduction of an artwork and create a short dance based on the shape-inspired movements it generates. Students could project a slide of the artwork behind them as they dance, use music, silence, or create their own sound. Preform the dances for the class, and if desired, for another class, parents, or for the school.

TO MAKE A GREAT CUP:

Supplies:
about 2 lbs. clay per student

a sharpened pencil for each student
2-3" diameter round tube or roller
paper towels
newspaper or canvas-covered board

1. Make clay flat by rolling

2. Design by drawing

2a. Hold pencil at a low angle while drawing

3. Make the illustrated cuts:
Cut#1

Cuts #2 and #3

4. Bevel end of slab

5. Turn slab over carefully

6. Place roller or tube at beveled end.

7. Roll clay around **paper-covered** tube

8. Put clay slip on the beveled edge

9. Roll the slab till the end touches the slab.

10. Back off a ways and place against a lump of clay to keep the slab from unrolling.

Score and slip area where the end met
the slab.

Cut in the middle of the moistened area.

11. Roll slab back up and bevel edge.

12. Stand the cylinder up. Compress the seam gently.

13. Moisten bottom edge of cylinder.

14. Place the cylinder on a slab base and cut around the cylinder, leaving 1/8" of clay extending beyond the cylinder.

15. Gently push the extra clay up onto the cylinder. Blend well, see arrow.

16. Make a handle now or when the cup is leather hard. Make by cutting a clay slab that is 1" x 7". Smooth the edges of the slab.

Score and slip an area 1"x 1" near the top of the cup, and a similar area at one end of the handle slab. Press the scored end of the slab onto the scored area of the cup,with the slab going up. Blend the end of the slab into the cup, supporting the rest of the handle.

Loop the handle out so it gives enough room for your hand to be around the handle. (Remember to provide some extra size for the shrinkage that will take place, about 12%) Cut handle slab off, allowing about 1" for joining. Score and slip both the end of the handle and the place the handle will attach. Press in place and smooth join.

17. Remove roller and finish the inside of the cup by smoothing with the end of a pencil.

18. Smooth lip of cup and clean up any burrs or roughness with a damp sponge.
19. Allow to dry slowly.
20. Bisque fire and glaze with food safe glaze.

PINCH POT BOTTLES

Make two pinch pots the same size, score and slip the edges, and join. Smooth the joins, paddle the seam lightly to firm the joint (the air trapped inside will keep the ball shape from collapsing). Make a bottle top by attaching a small circular slab to a small slab cylinder, or make from coils. Make a footrim from a small slab. Allow all pieces to just barely become leather hard.

Attach the footrim by scoring and slipping. Score the area where the neck will be joined and the bottom of the neck, slip them, and join. If the pinch pot ball is still a bit flexible, as it should be, you can cut a hole in the ball 1/4" smaller than the neck opening, and carefully pull that extra clay up on the inside of the neck to support the join. Smooth the outside join. If the neck joins the body of the bottle at too severe an angle, add a small coil and smooth in, as shown below.

EXPLORING VESSEL SHAPES--Pinch Pot in a Bag

Objective: The students will demonstrate their understanding of the vessel by exploring in clay and creating an object which incorporates volume.

Materials: clay, at least a 2" x 2" square per student
paper sacks large enough for the students to put both hands in and work on the clay
pencils

Introduction: The word pottery comes from the Latin word Poterium (which means vessel). "Form follows function" is a design theory meaning form should be the natural result of the intended function.

Tell the students you are looking for as many different answers to a problem as they can come up with. Hand each student a paper sack. Tell them you do not want them to see anyone else's work until you call for the project. Hand each student 1 to 1-1/2 pounds of clay. Tell them to make a vessel by pinching the clay inside the bag. The students may look at their own work but not at anyone elses'. After five to ten minutes, or when they feel good about their vessels, have the students all take their pots out of the bag at the same time. Have the students walk around and look at everyone's projects.

When they have seen each others' pots, ask the students the following questions: How are the vessels similar? How are the vessels different? Now place some pictures of insects or micro organisms around the room. (These pictures will work best if you have blown them up and then cut them into sections, so shape, color and design are evident but the insect or organism's identity isn't.) Have the students look at the pictures for two minutes. Then have them make over their vessel, using whatever appealed to them from the picture.

They can stretch or carve or scratch the clay, but limit them to five minutes. Then have them walk around and look at each others' pots again. Have them decide what is similar and what is different about the vessels now they've been altered using the photographs as inspiration.

Find something you like about each piece, and tell the students, because they will have moved their project from history (what they thought a vessel was) to a view of design that is wider, and also more personal and meaningful.

If they want, the students can refine the design, using the elements and principles of art: texture, line, shape, color, value, space; and variety, rhythm, balance, emphasis, proportion, and unity. They should organize their work by looking at how nature uses these elements and principles.

VARIATION ON A PINCH POT--The Hit Pot

Start as for a pinch pot (see pinch pots). When the pot is opened enough to insert two fingers, hold the pot up vertically, facing down, and hit it with the edge of a skinny board. As you hit the pot, turn it on your fingers or hand, so the hitting motion gradually stretches the clay downward. This will produce an organic looking pot with the feel of furrowed bark. Or, use a broader board and hit the clay with the flat of the board. This approach will still produce a pot with an organic shape, but without the deep furrows and ridges.

Turn the pot right side up and tap gently on the table to create a flat bottom. Dry slowly. This kind of stretched pot looks good with some kind of stain or oxide rubbed into the furrows in the clay and then sponged off. Fire as is or glaze, preferably with a non-shiny glaze that suits the organic shape. With a bit of practice, you can control the shape of the pot. The mouth of the pot must be wide enough for whatever is holding it, but you can achieve quite a bit of curve.

GLOSSARY OF CERAMICS CONSTRUCTION TERMS

leather-hard stage--when clay has dried long enough to be as stiff as thick leather. The clay will be able to support its own weight but will still be pliable.

Score and slip--scratch the surface of the clay in the area of a joint with a sharp utensil like a needle tool or a fork. Paint the scratched area with clay mixed with enough water to be of paste consistency. This mixture is called slip.

Slab--a rolled, patted, or stretched sheet of clay. For most items, the slab should be 1/4"--1/3" thick.

Rib--a curved tool made of wood, rubber, or thin metal. Useful for joining coils and smoothing the sides and insides of forms.

Cutting wire--a thin, strong wire, with short pieces of dowel on the end. Can be purchased or homemade.

Loop tool--a wooden handle with wire or thin metal loops on the end. These come in various shapes and sizes.

Cones--small cones of very pure clay, which melt at specific temperatures. They are used to determine the temperature in a kiln, and they indicate the temperature specific clays mature at. The cone will appear as a triangular symbol followed by a number, like [triangle]5. The numbers [and temperatures] go up from [triangle]1--14 and down from [triangle]01-- 022.

Supply Information

Self-hardening clay probably can be purchased most cheaply from a crafts and art supplies catalog through your school or district office. Art teachers will have catalogs if you don't.

Pottery clay can be purchased from stores such as Interstate Ceramics in Orem. You can look under Ceramics in your local phone book, or check with local high school or college teachers--they may be able to point you to a good source or may have extra "studio clay" made from scraps, which you can purchase for a reasonable price. Just make sure you know what "cone"the clay fires to. Underfiring stoneware doesn't cause problems except that unglazed ware is somewhat porus, but overfiring pieces results in distorted or even melted pieces, and unhappy students.

You can expect to pay about $5.25 for a 25-lb bag of ready-to-use clay, although many stores give discounts for purchases of 50 lbs or more. One 25-lb bag of clay will be enough for 10--12, 1" x 6" slabs, which will make a 1/4" thick slab about 12" x 12". Or, you can get about 30 pieces 3" x 3", a good size for a beginning pinch pot.

Glazes and stains can be purchased at many local crafts stores or may be ordered. Prices of glazes vary widely because the cost of the colorants varies widely.

Small boards may be available at local cabinetry shops--in their scrap barrels--usually free. Skinny pieces of fine-grained woods like maple and birch can be made into modeling tools using a belt sander. A parent may be willing to make these for you. For ideas on useful shapes, look at the wooden tools sold in craft stores or talk to someone who is experienced in working with clay. Tongue depressors and popsicle sticks are useful as is and the ends can be sanded straight by hand. Buy round wooden tooth picks or bamboo skewers--they make fairly good cutting tools and are very cheap.

These same boards can be used as guide boards for rolling clay or can be used as paddles.

Cellulose sponges are good for cleanup, and they can be cut into 2" x 1" pieces that, when moistened, are useful for smoothing edges and blending joined parts.

Pieces of sturdy cardboard can be cut from cardboard boxes. Furniture and appliance stores generally have the biggest boxes; and if asked, store owners may save boxes for you.

Material stores or clothing manufacturing plants throw away heavy cardboard tubes all the time. Use a band saw or hand saw to cut to size.

Yard sales and thrift stores may have items useful as stamps as well as rolling pins, spoons, forks, and knives, and may be a source for heavy cloth at low prices.

Many of the schools now have a ceramics kiln. If your school owns a kiln, but has no one who knows how to fire it, find someone to teach you. Some districts, such as Alpine, have offered inservice classes in how to fire kilns. It isn't a difficult skill to learn.

An art teacher at your school or in your district may be willing to loan tools, give advice, provide firing, recommend a place that will fire the pieces, or to provide advanced students as helpers. Ceramics students from a local college may also be willing to help, as may parents or local potters or sculptors.

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