

Bowls with Natural Impressions

Art Curriculum Matrix: K - 6

Project	Bowls with Natural Impressions
Grade	K-6
Content/theme	The relationship between bowl elements and how form affects function
Objectives	<ul style="list-style-type: none"> • Create simple slab bowls over hump/drape mold • Collect natural objects and experiment to make textures/impressions • Understand how texture changes from physical to visual texture • Understand how placement of texture creates different compositions • Understand how surface design changes feeling/use/value of object
Essential Questions	<ul style="list-style-type: none"> • How does your understanding of a leaf change when it is impressed into clay? • What adjectives can you use to describe how the natural object looks? What words describe how they feel? Are those two groups of words different? • How can you “read” a texture through visual marks?
Demos/Skills	Rolling slab Cutting slab Impressing objects Draping slab over form Cutting away excess clay Adding foot (optional) Brushing bisque with underglaze to highlight impression
Vocabulary	Slab Hump/drape mold Impress Underglaze Texture Marks Foot Rim Elements and Principles of Design
Artist/Culture References	Historical examples: Art Deco/Nouveau pottery, Grueby Co. & Encaustic Tile Co. Palissy Ware Majolica, Minton Co. & Wedgewood Contemporary examples: Richard Vincent, Minnesota Ellen Grenadier, Massachusetts
Materials	Clay (2 lbs. per student) Rolling pins Small brayers (to help press clay slab over hump bowl) - optional Newspaper/canvas/surface for rolling clay that won't stick Soup-size, paper picnic bowls Fettling knife/pin tools (cutting slabs & scoring) Underglaze & glaze for finishing surface Small sponges Clean up sponges Plastic for slow drying

Process

Prep Activities			
	Activity	Steps	Dialogue
1	Nature walk & collection of natural objects (Leaves, grass, small sticks, pebbles, bark, pods, etc. Look for flat objects. Some height is ok, but if too large will crack slab)	Go on a walk around the school Pick up 3-5 natural objects that will create texture or impression in clay	<ul style="list-style-type: none"> • What kind of textures or shapes do you notice when you are walking around? • How do they feel when you rub your hand over your object? • What kind of impression do you think it will make in clay?
2	Experiment with impressions/texture (optional)	<ol style="list-style-type: none"> 1. Roll slab 2. Press objects into clay, experimenting with pressure, placement, rhythm 3. Ball up clay and return to bag (add a little water to rehydrate) 4. * Note: This step could be done in Play-doh if re-working clay is too much trouble 	<ul style="list-style-type: none"> • When you rubbed your hand over your object, describe the texture you felt. • When you look at the marks your object made in the clay, can you imagine how it feels? How? • What does a texture look like when it is translated into clay? • How does the impression change when you push into the clay forcefully? • What does it look like when you group a lot of impressions close together?
Construction			
	Activity	Steps	Dialogue
3	Roll clay slabs	<ol style="list-style-type: none"> 1. Roll slab, trying to make it round and about 2-3 inches larger than the rim of the paper bowl 2. Focus on even rolling (can use 2 flat 1/2" sticks as guides) 	<ul style="list-style-type: none"> • What helps in rolling an even slab? • Is it better to do small tiny rolls or large rolls? • What part of your hand should you use? • Does turning the slab help? Why?
4	Impress found objects	<ol style="list-style-type: none"> 1. Lay found objects on table 2. Place slab over objects 3. Gently roll slab on top of objects 4. * Note: Could also lay objects on top of slab, layer with piece of canvas, and roll on top of canvas to impress objects 	<ul style="list-style-type: none"> • How are you going to place your objects? Overlap them? Line them up? Place them near middle? Near the edge? • Are you going to use more than one object? How will you decide which object to use where? • How closely will you impress them? • How will your placement emphasize certain parts of the bowl form? Organize around the rim or travel over the edge?
5	Cut slab in a circle, using upside down bowl as template	Place paper bowl on top of slab, keeping found objects in place Cut around perimeter of bowl using fettling knife or pin tool	
6	Drape bowl	<ol style="list-style-type: none"> 1. Carefully drape textured slab over bowl form 2. Press clay down gently to conform to shape 3. Cut away clay to form a rim 	<ul style="list-style-type: none"> • Do you want to make impressions on the exterior of your bowl too? • Will you impress the outside the same way as you did on the interior or try a different approach? • How can you use impressions to emphasize different parts of the bowl exterior?
7	Rim	<ol style="list-style-type: none"> 4. Cover bowl with plastic and let sit overnight 5. Flip bowl over and remove found objects on interior 6. Finish rim 	<ul style="list-style-type: none"> • Note: If you will not see student in a while, completely wrap the piece in plastic to keep from drying out • • What do you need to do to make the rim look finished? • Should the rim turn inward or outwards? How thick should it be?

Process cont.

8	Bisque		
	Activity	Steps	Dialogue
9	Underglaze application on impressions/texture *Note: darker colors will show texture better than lighter colors, i.e.: teal, green, blue, brown, black	<ol style="list-style-type: none"> 1. Brush underglaze over impressed designs 2. Let dry 3. Rub off with wet sponge so underglaze stays in recessed impressions 	<ul style="list-style-type: none"> • What do you notice when you wipe off the underglaze? • How does it change the impressions/texture?
10	Glaze fire	1. Glaze with transparent glaze	
11	Reflection		<ul style="list-style-type: none"> • Can you feel the impressions in your final glazed bowl? • How does the underglaze color change the impressions? • How do the impressions look different from the way the natural objects you collected look? • How do the visual impressions/texture in your bowl show how the object feels in real life? How did the marks change when you used a less/more bumpy object? Were the marks close together? Further apart? Deeper? • Given your observations, what does a texture look like when translated into marks? • What do you now know/observe about the object you collected that you did not see at first (before you went through art process)? • How did your placement of impressions affect the overall feeling of your bowl? Do the impressions change the way you see the bowl form? • How do the natural impressions change the feeling of your bowl? Does it make your piece feel fancier/more special? Does it make you think of things other than eating? • What could this bowl be used for? Would you use it for something else if it didn't have the impressions?



Resources for Bowls with Natural Impressions

K-6 Lesson

Lesson Resources:

Video: Elements of Art: Texture. 3 minute discussion of visual texture vs. actual texture explained by showing examples from Western artistic cannon
<https://www.youtube.com/watch?v=YoOb3JSDAUo>

Lesson Plan on Palissy Ware. Lesson plan focusing on Palissy Ware as social critique.
<https://museum.okstate.edu/sites/default/files/Lesson%20Plans%2054-62.pdf>

Material/Technical Resources:

Video: Making Leaf Clay Impressions. Short video showing how to roll leaves into clay.
<https://www.youtube.com/watch?v=2b2LKhigdMQ>

Video: Making a Hosta Bowl. 10 min video in which artist shows steps in process of making his work from leaf impression to staining with wash on bisque to glazing.
<https://www.youtube.com/watch?v=pa3aVdMsUck>

Working with Bisque Molds & Texture, Kari Radasch. Ceramic Arts Daily video on creating a hump bowl from slab. In-depth discussion of line, rim, foot, finishing of pot.
<https://www.youtube.com/watch?v=LUJFwy7QnO8>

Historical Ceramic Resources:

Article & Images: "Bernard Palissy and his School," Heilbrunn Timeline of Art History, Metropolitan Museum. Essay on Palissy and his influence with images from their collection.
http://www.metmuseum.org/toah/hd/cera/hd_cera.htm

Article: "Bernard Palissy." Short, well-written description summarizing Palissy's influence as a scientist, scholar, and artist.
<http://www.strangescience.net/palissy.htm>

Article: "Majolica On Both Sides of the Atlantic," Marilyn G. Karmason. Short article that summarizes her book on Majolica and outlines different manufacturers. Art history focused.
<http://majolicasociety.com/majolica-history/>

Book: Majolica: A Complete History and Illustrated Survey, Marilyn G. Karmason, 2002. The only large survey on the history of Majolica written to date.

Article & Images : "The Art and Craft Movement in America," Heilbrunn Timeline of Art History, Metropolitan Museum. Essay on Art & Craft Movement with images from their collection. Shows other media besides ceramics.
http://www.metmuseum.org/toah/hd/acam/hd_acam.htm

Article: "The Architecture of Art Tile: Rediscovering a forgotten side of early 20th- century ceramics," Richard D. Mohr, Old House Journal. Essay on the rise and fall of ceramic, Majolica-style tile in homes and commercial construction in the 20th c.
http://www.oldhousejournal.com/the_architecture_of_art_tile/magazine/1421

Artist Resources:

Website: Richard Vincent. Minnesota based potter who participates in St. Croix Valley Pottery Tour each year.
<http://richardvincentpottery.com>

Website: Ellen Grenadier. Potter who currently lives in the Berkshires who frequently uses leaf impressions in her work.
<http://www.grenadierpottery.com>



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Decorative Materials

Material	Description	Decorative techniques	Stage applied	Can combine with...	Source	Advantages	Low/Mid/High Fire
Slip	Colored liquid clay that is decoratively applied to the surface of a pot	<ul style="list-style-type: none"> Slip trailing Mishima/inlay Paper resist/stencils Sgraffito 	leather hard	<ul style="list-style-type: none"> underglazes washes/stains 	Commercial or individually mixed	Changes the color of the pot; used with many decorative techniques	Formulated for low, mid, and high fire. Need to use slip that corresponds with clay body and firing temp.
Engobe	Similar to slip but has more flux (melter). "Engobe" often used as synonym of "slip."	<ul style="list-style-type: none"> Same applications as slip 					
Underglaze	Can be used under clear glaze; can be used like like slip; can be used on top of texture and wiped off	<ul style="list-style-type: none"> Brush on wipe-off stamps/impressions Paper resist/stencils Brush onto bisque surface (under the glaze) 	leather hard, bone dry, or bisque	<ul style="list-style-type: none"> washes/stains slip 	Commercial	Consistent; commercially available; bright colors	All work at low-fire. Most at mid-fire. Some darker colors work at high-fire but need to be tested.
Washes/Stains	Metallic oxide or Mason stain combined with flux + water	<ul style="list-style-type: none"> Brush on wipe-off stamps/impressions Brush on top of raw glaze (over the glaze) Brush onto bisque surface (under the glaze) 	bisque; can be applied to bone dry work but takes more skill	<ul style="list-style-type: none"> slip underglazes 	Individually mixed in 1:1 ratio of Flux:oxide/Mason stain + water	emphasizes texture/impressions; strong color that will impact glaze color	Will work at any temperature and is not temperature specific.
Terra Sigillata	Finest particles of clay applied in layers and burnished to get glossy sheen	Good for raku, pit firing	bone dry	<ul style="list-style-type: none"> slip can be applied over terra sigillata so glossy/matte contrast like Maria Martinez 	Individually mixed	lightly seals surface; glossy sheen and doesn't cover up clay; historic connection	Low-fire only



Decorative Surface Material Definitions

Slip/Engobe

Material: A homogenous mixture of clay and water. Decorative slip differs from slurry used for joining pieces or produced in the process of throwing. Decorative slips are usually mixed from a recipe and have more flux (melter) than a slurry-slip which is just clay + water. They also often have a colorant added. “Engobe” is often used synonymously with “slip,” but technically, an engobe has more flux than a slip as sits between a slip and a glaze. Slip recipes are designed for specific temperatures (low, mid, high-fire) so that they melt in-unison with the clay body. Therefore, it is important to make sure you choose a slip that corresponds to your clay body and firing temperature.

Source: Slips are commercially available pre-mixed or in powdered format. Casting slips are different from decorative slips in they have a deflocculant added which makes the slip behave differently. While it is possible to use a casting slip to decorate, it can cause problems, and it is probably best to purchase only a true decorative slip for classroom use. It is much cheaper to mix a slip by measuring recipe of dry chemicals than to purchase it pre-mixed. This is easy if you have a gram scale, and there are many recipes online for decorative slips at every temperature.

Mixing: Slips can be the same color as a clay body or they can be colored with oxides or Mason Stains to create a color that contrasts with the clay body. The most often used slip is a white slip to cover a red, low-fire, terra-cotta clay body in order to get a white ground. To mix a slip, measure ingredients, add water, sieve, let stand for 24 hours for full water saturation. To mix colored slips, start with a white slip recipe and add Mason Stains or metallic oxides to the slip base. To get light pastel color, add 5% Mason Stains. To get a more saturated color, add up to 20% Mason Stains. Metallic oxides can also be added to color slip, however, the percentages vary from oxide to oxide. In general, oxides are much stronger than Mason Stains and should be used from 2-6% in slips.

Use: Slips are used with a variety of decorative techniques, including sgraffito, slip trailing, paper resist/stenciling, and inlay/mishima.

Application: Slip is usually applied to leather-hard ware before it is bisque fired. There are slips recipes designed to be applied to bisque ware, but they have to be specially formulated for shrinkage. Common examples of these are “flashing slips” applied to bisque ware for wood firing.

Artists often manipulate the consistency of slip through adding a deflocculant or flocculant. This will affect the look of the slip after it is applied. A few drops of saturated solution of epsom salts and water can be added to a slip to flocculate or thicken it. Darvan 7 or Sodium Silicate can be added to a slip recipe when it is initially mixed to deflocculate it or make it appear fluid without adding a lot of water.

Wash/Stain

Material: A solution of a metal oxide and water. Often a flux is added to this mixture to help with melting and adhering to clay body.

Source: Not commercially available, but easy to mix by hand.

Mixing: Mixed by measuring 50/50 by volume (1 tsp./1 tsp.) of metallic oxide/Mason Stain to flux. For a flux, most people use Gerstley Borate, Gillespie Borate or Frit 3124. Water is added to the powdered chemicals until it is fluid and brushable.

Use: Can be used to highlight impressed designs and create color contrast. Wash/stain is brushed on surface and sponged off so it remains only in recessed areas. Also used in combination with glazes to create color variation or used with brush to paint an image. Washes/stains are very strong concentrations of colorants and in many ways can be used as a very strong underglaze. Washes/stains can also be used over glazes. A common technique is brushing a rutile stain over Tenmoku (iron saturate glaze) to create an amber line.

Application: May be used under or over a glaze. Usually used on bisque ware but can be used on green ware if careful. Washes are very strong and concentrated. If used too heavily, all washes/stains will look black regardless of the color. Because the metallic oxides are very concentrated, you should always use gloves when handling washes/stains.



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Underglaze

Material: Underglazes are an oxide(s) combined with a small amount of flux (melter) that binds them to the clay body and integrates them with the glaze. Underglazes also have gums added to them which make them very brushable. Underglazes gain their full color with the 'wetting' action of the covering glaze.

Source: Commercially available. Purchased wet-mixed in 4 or 16 oz. bottles from ceramic supplier.

Use: Underglazes are used for their intensity, a wide range of color, and stability of that color. They are most often used as low temperatures (cone 04), but some colors (darker colors with cobalt, chrome, copper as dominant oxide) are still effective at cone 10 temperatures. Underglazes are used much like slips to add color to a ceramic surface. They can also be used instead of stains/washes to highlight impressed designs. They can also be used in a painterly way and combined with other colors (although it is often hard to tell the intensity and hue of the color before firing).

Application: Underglaze can be applied to pieces before or after bisque firing. They should be applied under a glaze (not on top). They are a very uniform and stable decorative material and the raw color you see is dull but similar to the fired color. Often, several layers of brushed underglaze are needed to get an opaque and uniform color. Underglazes are often used in classroom settings because they are commercially available, easy to use, come in a broad range of colors, provide an intense saturated color, can be applied to both green and bisque ware, and are easy to clean up. However, they are expensive!!

Terra Sigillata

Material: A liquid suspension of the finest particles of clay that is applied to a bone dry pot. If polished or burnished just after application, may give a high gloss. Acts as a seal or porous clay, making it less prone to absorb moisture. All ancient Greek red-black pottery, Roman red wares, and most Native American pieces were finished with terra sigillata, without the use of glaze. Many contemporary potters who work in earthenware use terra sigillata to seal the foot of their pots.

Source: Individually mixed. Not available commercial. To mix = deflocculant + wet + dry materials, blunge, let sit for 2-3 days, siphon off fine-particle mixture. The color of the terra sigillata is determined by the color of the clay used. Most terra sigillata are red, buff or white. However, white terra sigillata (mixed from EPK or OM4 ball clay) can be tinted by adding Mason Stains.

Use: Does not make a piece food safe nor vitreous. Does not work above cone 04 since the molecular structure changes at high fire, destroying the glossy sheen. Does not work under a glaze but will be dissolved by glaze over it. Terra sigillata works very well with pit/sawdust firing techniques.

Application: Apply to bone dry clay. Usually 3+ coats are needed. Often burnished with a rock, spoon or cloth to help get sheen. Burns out at cone 04 and above.