

HANDS-ON CLAY

An exploration of mankind's unique relationship with clay.



CHAPTER 1

INTRODUCTION TO CERAMICS

INTRO TO CERAMICS

What exactly is ceramics? Ceramics are clay objects that permanently hold their shape after being fired at high temperatures. Man has been using clay since prehistoric times. As one of the most abundant of all natural resources, this material has changed the way humans live in many ways. The substance has been used all around the world, with artists using many of the same techniques for thousands of years. How is it that people separated by oceans, time, and language barriers all learned to process, shape and fire clay in similar fashion? Clay served early man's needs by

providing a versatile material that could be tailored to suit many different needs. Charles Fiske, historian and writer of The Emergence of American Clay Art, said, "Clay is capable of the wildest, materially substantial poetry. It comes very close to being a sacred medium; on the other hand, it comes close to being one of the most vulgar mediums man uses. It is at once eternal and absolutely momentary. Things have survived that are 5000, 6000, 7000 years and older and they can all be smashed to nothing with one hammer."



Pottery Dating between 1000 and 1700 B.C. Found along the Mississippi

Today modern man still uses clay for a myriad of different purposes.

Ceramics are used in applications like the tiles in kitchens and bathrooms that are found all across the globe. Glazed tiles are durable, yet easy to clean and do well with repeated exposure to moisture. Obviously, cookware and dinnerware has been made using clay for thousands of years. With the advent of the Industrial Revolution, modern man has continued this tradition with the use of technology and more advanced processes. The oldest discovered bricks date to 7500 B.C. and were found at Tell Aswad, in the upper Tigris region and in southeast Anatolia, close to Diyarbakir. It has been estimated that a trillion bricks are made each year world wide. Bricks are a critical



ingredient in architecture all around the world. Clay has provided a sturdy, sanitary and cost effective way to make toilets that are found all throughout the developed world.

Clay has several more unexpected applications as well. Ceramic panels have been used since the beginning of the space program. These panels provide protection from the heat generated on entering and exiting earth's atmosphere. Automobiles use ceramic components in catalytic converters to convert harmful emissions into non-toxic gases. Modern medicine has also

benefited from ceramic applications; ceramic materials are used to stimulate bone growth around artificial joints. Also, if you have ever had a tooth colored crown at your dentist, chances are pretty good that the material used is ceramic. Ceramic components are used every day in high-tech technology like televisions, computers, and electric motors like vacuums and blenders. So it should be pretty obvious that man has a very intimate understanding of clay. We have a great history of using clay to suit our needs. The question then arises, what is clay and how does it form? Is it just mud, or is there something more to it?

Clay is formed by the erosion and decomposition of the earth's surface (igneous rock) over thousands of years. The constant breaking down of igneous rock by wind and rain relocates particles of silica and alumina by streams and rivers that cut and shape our lands. These newly relocated particles become the seeds that will ultimately become clay. The addition of decomposed plant and animal matter and various other natural amendments make a menagerie of different clay bodies all over the world. The formula for

clay can be seen here. There is one molecule of alumina, two molecules of silica, and two water molecules.

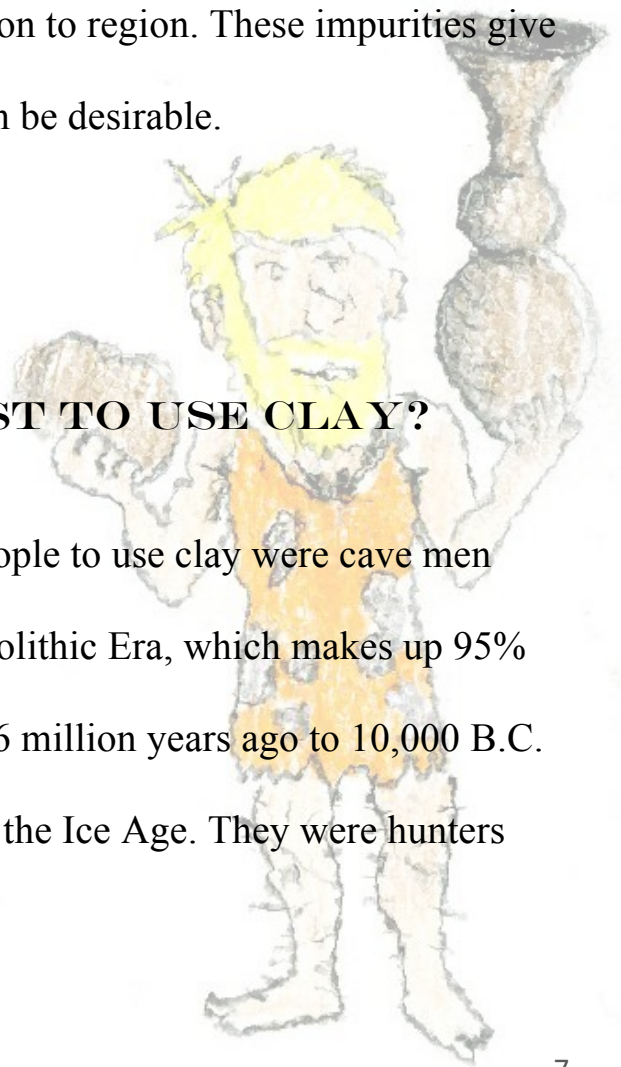


Clay is broadly classified in order of its evolution. The first classification is the newer or purer clay, and then the older clays that have more additives are listed last. The process of decomposition of igneous rock is a constant happening. It is a continual process. Another interesting consideration in the formation of clay is that, generally speaking, the further clay is from its parent source or site of initial erosion, the smaller the particle size. This varying particle size factors heavily in the plasticity or flexibility and its ability to be manipulated. Clay begins its journey at the parent source. By weathering through wind and precipitation, small particles begin to drift away in rivers and streams. The first major category of clay is called stoneware. Stoneware is a grey to buff, non-translucent clay body which

vittrifies or crystalizes between 2150- 2383 degrees. Stoneware is fairly plastic but does have some limitations. Potters have often used stoneware to throw pieces on the wheel but commonly mix it with another clay that might offer more plasticity or a desired color. The next category of clay is known as earthenware. Unlike stoneware that are more sparsely located, earthenware is found all over in the world. People have often called this clay “common clay”. Some people call it common clay because of it being found all over. Whatever you call it, it is more plastic than its parent clay stoneware. It is also full of impurities that differ from region to region. These impurities give earthenware unique characteristics that can be desirable.

WHO WERE THE FIRST TO USE CLAY?

Historians speculate that the first people to use clay were cave men living during the Paleolithic Era. The Paleolithic Era, which makes up 95% of mankind’s time on earth, spans from 2.6 million years ago to 10,000 B.C. The earliest of these people were living in the Ice Age. They were hunters



that survived by moving with herds of animals, preying on the animals when they were in need of a meal.

They probably lived in caves or whatever natural shelters that their environments gave them. As a curiosity, and to fight boredom, early man probably played with naturally found clay that lay in the cave floors. Being experienced with building fires, they made fires regularly for warmth. For whatever reason, they are said to have thrown clay figurines into fires.

When wet clay is heated rapidly, the water in the outer clay quickly evaporates, causing the clay to shrink in size. Unfortunately, if the piece is not very thin, the moisture in the interior of the clay begins to turn to steam. This vapor is trapped and, as a result, there is a small violent explosion that releases the water vapor. When this occurred from being heated too rapidly, these early cave artists thought that they had stumbled on some sort of magical power. This then became ritualistic entertainment for them. At some point a piece dried out too long before being tossed into the fire. The boom they were looking for never happened. The next day after the fire had died the primitive people woke to discovered that their clay had become hard like

stone. This was the birth of ceramics. The word ceramics simply means fired clay.

The piece pictured is known as Venus of Dolni Vestonice. The small sculpture was found in 1925 at the base of Devin Mountain in the Czech Republic. Historians believe that this nude female form might



Burial Jar (Guan) Period:
Neolithic period, Majiayao
culture

have represented a goddess of fertility. The sculpture was found in two pieces. Standing at only 4.4 inches tall, this sculpture carbon dates back 29,000 – 25,000 B.C., making it the oldest known intact piece of fired clay to ever be found.



The Venus
of Dolní
Věstonice
([Czech](#):
figure dated
to 29,000–
25,000 [BCE](#))

Early man began to use this process in a multitude of ways. Archeologists have found containers to cook with and eat out of as well as preserve food and carry water. In ancient Mesopotamia, cuneiform script was first developed to inventory grains and other foods that were kept in ceramic vessels. This system of writing is the first written records that has been

discovered. Ceramic funerary vessels have also been discovered that held ashes and other human remains.

As they discovered more and more about the importance of their new technology, they begin to pass their discoveries on to future generations. They sought out the best locations to dig clay, often preparing clay that would be saved for years to come. They learned the best methods to remove impurities and blend in additives to make the clay stronger. Methods for decorating, drying, and firing also had to be perfected through trial and error. Paleolithic man added ceramics to their growing arsenal of tools and processes that begin to pave the way for early man to be settlers instead of nomads.

On Assignment:

Make a comic strip that illustrates how man first discovered clay to be a material that can make objects that could serve a menagerie of needs.



Your comic must have at least 6 cells. Use color for interest.

OUT OF THE GROUND & THEN WHAT?

Although clay is one of the most abundant resources at our disposal, it does require some thoughtful preparation. Clay, in its natural state, usually has many impurities that could hinder easy production of ceramic forms.

Early artists who pulled clay right out of the ground would often first dry it out. They would then crush it up into smaller pieces that could be sorted out.

They would take out sticks, rocks, and other impurities that could be removed

by hand. They would then slowly reintroduce water to the clay until they achieved the moisture content they were after. This process was very labor intensive, so many sought for an easier solution. Levigation was the answer to many. With this process, the clay was collected and then immediately immersed in a large container of water. The muddy mixture was stirred up into a thin slurry. The heavy contaminants like rocks, coarse sand, and bones would sink to the bottom. The lighter contaminants like leaves and other vegetation would float to the top. The top would then be poured off. The clay would be left for some time to thicken and then the clay would be removed off the top until the potter reached the heavy contaminants at the bottom.

HOW TO SHAPE AND FORM

The process of becoming a skilled craftsmen working with clay takes years to perfect. However, the basic methods of manipulating clay are fairly easy to utilize. These methods will later be subjects of more in-depth study. For now, we will briefly



present them. The basic methods that most potters have used and still use today are as follows:

- Pinching
- Coiling
- Slab building
- Molding
- Wheel throwing

Pinching

The most primitive method is pinching. A potter takes a ball of clay in their hand and then opens up the ball usually by pressing their thumb into it. They then rotate



Pinch Vase by Barbra Walsh

and pinch the piece until it has the shape they desire. The more the piece is pinched, the thinner the pot becomes. This process is very intuitive and has served potters for thousands of years. Small figurines and other non-vessel forms can be pinched out as well. An additive

or subtractive method can be utilized in conjunction with the pinch process. In the additive method, pieces of wet clay can be added onto a larger mass to form the desired results. Subtractive is the exact opposite. Clay is slowly removed in desired areas to get desired results. Pinching generally only involves the hands and the clay.

Coiling

Coiling is believed to be next in the evolution of processes. This process involves the potter rolling out long ropelike cords of clay that can then be made into rings, that can then be



This Nigerian piece features coils and pinched clay.

stacked - one on top of each other. The coils are then blended together, often on the outside and inside but usually at least on the inside of the vessel. The blending of the coils helps hold the vessel together and makes it less porous. The coiling method made



Jomon Potters from ancient Japan used coils as a decorative feature in this piece.

larger and taller vessels much easier to make. Pieces have been made exclusively using coils to create vessels. A potter can even have a coil spiraled around itself to create the bottom of the vessel. Many pieces have been created utilizing pinch as a starting point and the coils added afterwards to achieve more height. Most early food storage and preparation containers utilized these two methods to create beautiful but utilitarian forms.

Slab Building

Slab building is a bit more complex. With this method, the potter flattens out large sheets of clay. Modern potters use slab rollers or rolling pins to accomplish this task. Clay can also be thrown down on a flat surface at a



slight angle, forcing the clay to spread out. This is much like the way you might have seen someone working pizza dough at a restaurant. These pieces will be cut to shape and then pieced together to form ceramic forms. Often, the slabs of clay are left to stiffen up before being joined together.

Scoring and slipping may be needed to butt these pieces together. Scoring is simply scratching up pieces of clay to be joined together. The concept is that the clay platelets from each side will marry a bit more. After the sides are scored, slip is usually added to further aid in this connective process. Slip is made by mixing clay with water. Slip is a fine, liquid form of clay used with scoring to cement together parts that have

been formed separately. It is very common to score and slip pieces when working with any method. Although, it's probably most common with working with slabs since slabs often have to stiffen up a bit to be strong enough to hold their



The work of Scott Dooley is made of slabs that have been rolled into tubes and then pieced together.

own weight up. Slab pottery has a distinctive look. It is often more angular than pinch and coil pots which generally have an organic, rounded look.

Molding

Molding is made possible by the use of another form that the clay will be pressed in or on. Most likely, in the past, clay was pressed into woven baskets. After the clay dried, the loss of moisture would cause the shape to shrink and separate from the sides of the basket. The clay, now shaped like a pot, was removed, and, when dried in the sun on hot sand, it retained the basket pattern. Early potters also used objects like gourds or rocks to drape clay on just long enough to stiffen a little. Modern ceramics use commercial molds to pour clay slips into making all kinds of forms. With this process, the entire cavity of the mold is filled with slip. After just a few moments, the plaster in the mold begins to dry out the slip that is in contact



with the mold. The slip that is not in contact with the mold is simply poured out to form the void in the inside of the form. The whole piece is given more time to stiffen. After some time, the vessel

can be removed from the form.

The Wheel

Many think of the potter's wheel when they hear the words pottery or ceramics. Often we joke about the movie Ghost's scene that depicts a couple at a wheel sensually making a piece.

So when and where did the potter's wheel get its start? The



story probably begins in the Middle East around 4000 BC (6000 BP). The village settlements were growing in size and prosperity. A new

phase in man's development was happening. In what is today southern Iraq, or ancient Mesopotamia, the first urban civilization was being created; villages grew into towns and then towns into the great city states: Ur, Uruk, Ubaid, Eridu, Lagesh etc. By 3000 BC, the people of these cities, the

Potter's wheel of Early Indus Valley Potters.

Sumerians, had already established a sophisticated trading commercial culture.

This was the first town and city based civilization on this planet. New crafts and occupations evolved. More skills and tools were invented to keep up with growing demands. Occupational specialization was a new concept. Instead of everyone doing the same tasks, people began to take on specific jobs that they were more suited to do. Most of these changes affected the work and life style of the men much more than women. Most women were already almost



fully occupied and specializing in the vital task of bearing and rearing children. Any other tasks done by the women must therefore have been part-time and close to the home. Women almost certainly developed the techniques of sewing, weaving and basket making in most prehistoric communities.

The women were probably also the first real potters - the makers of bowls, dishes, jugs etc., so it is not surprising that in these early village societies building a basket and coiling a pot had a lot in common. The first potter's wheels were simply turntables to aid potters who were making coiled vessels. With the advent of the potter's wheel, more men seemed to take more of an interest in working with clay. Societies were becoming more advanced and technology was beginning to make jobs more simple, less labor intensive and closer to home. The established division of labor for men and women were changing.

SURFACE DECORATION

As you grow as an artist, you will begin to become more familiar with different art lingo. Two terms that are often used interchangeably are form and shape. **Shape** is technically the path of a line that delineates itself from the area around it by enclosing a space, the boundaries of which are delineated by other elements of art (i.e.: lines, colors, values, textures). Shape is most always used in reference to a two dimensional piece. On the other hand, **form** refers to shapes that have an actual or implied third dimension giving them the addition or illusion of depth.

The vessel form provides its creator with a three dimensional canvas that can be used to further express themselves. Potters often leave their forms unadulterated to bring emphasis to the form itself. However, others prefer to

get creative with even the surface of the vessel. There are many different techniques that can render different surface textures to the body of a piece.

One of the oldest techniques is burnishing. **Burnish** is using a smooth object like a river rock or the back of a spoon to polish the surface of leather-hard clay. The process leaves the clay less porous and more impervious to water. This makes the piece easier to clean by pressing the clay particles closer together. Burnishing makes it less likely to grow bacteria, mold and mildew. Ancient potters found burnishing to be a valuable process.



Incising is another method for adding visual elements to the surface of a piece of ceramics. **Incising** is simply engraving a decoration into unfired clay with the use of a sharp tool. This is still a very common practice with potters all around the world.

There are no limits to the type designs that a potter could do with incising.

Combing is very similar to incising in that you are using an implement to mark the surface. **Combing** marks the surface with uniform lines by dragging a comb or other object across the surface.



Impressing involves the use of a stamp of some sort to press a texture into the surface of clay. The potter presses an object with an interesting texture into the clay and then gently pulls it away to reveal an impression of that shape in the clay.

There are numerous commercial stamps with a wide variety of subject matter made for potters today.



GLAZING

Early potters needed to find a way to make smoother surfaces that were more water tight. Simply firing clay doesn't make it resist water. If you fill a fired container with water it will eventually seep through the vessel. Glaze is a thin coat of glass that fuses to the surface of the clay. It offers a water barrier as well as giving the vessel a color or texture determined by the formulation of the glaze. There are glazes made to fuse to the surface of fired clay at various temperatures. The earliest glazes date back 8000 – 5000 B.C.

Just like any of the other advancements made in ceramics, glazing was a process of trial and error. Many successful glazes were kept secret. Even today, when a potter creates a unique glaze, the recipe is kept secret. Most glazes are simply raw materials, silica, alumina, and various colorants that are crushed to powder, then suspended in water, and then painted on the once fired pottery. The piece is then fired once again to allow the materials to melt and fuse to the surface.



Ancient Egyptian glazed pottery

There are four different glazes that were used in ancient ceramics. Alkaline glazes are first recorded around 4000 BC in the Middle East. **Alkaline glaze** is a simple mixture of sand and ashes from burnt plants. The mixture worked as a simple glaze that would fuse to ceramics surfaces

leaving a smooth, somewhat transparent surface. Potters would use underglazes made with various oxides and pigments prior to glazing.

In Asia, ashes from plants were mixed with feldspar minerals to create ash glazes. These glazes were thin and only slightly altered the texture of the piece. However, the glaze was hard and offered a very good water barrier. This method of firing was only common in China, Japan, Korea, and Thailand. However, this technology was revealed to westerners around the 1700's when the far east began to have more contact with the outside world.



Early Islamic Pottery with Lead Glaze

Lead glazes are now considered unsafe because of their carcinogenic effect.

Lead is naturally found in low levels in most clay bodies. In some areas, it is much more prevalent in the clay. In these clay bodies, the clay seems to almost glaze itself. Islamic potters explored this happening and attributed the glazing effect to materials high in lead. They later discovered that by adding tin oxide, the glaze would fire to a nice white.

In the twelfth century, German potters were exploring ways to achieve the high temperature firings that Asian potters were achieving with their porcelain firings. For whatever reason, someone, as a curiosity, threw salt into a kiln load of pottery as it was just starting to

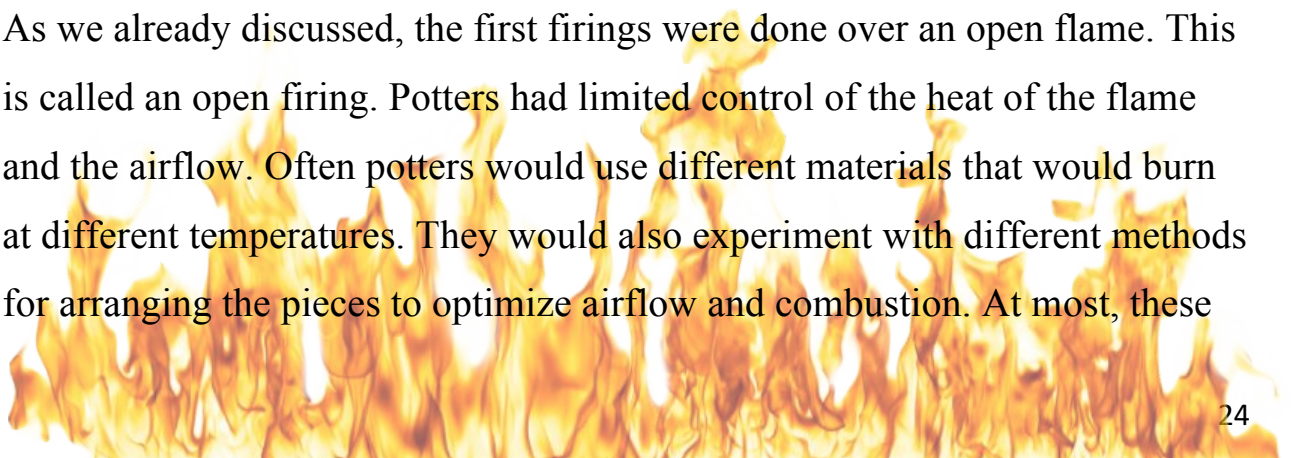
have a dull red molten look that happens at about 1000°. As a result, the instantly vaporized salt bonded with the silica in the clay to form a hard, durable glaze. This process has been refined and is still used for effect today.



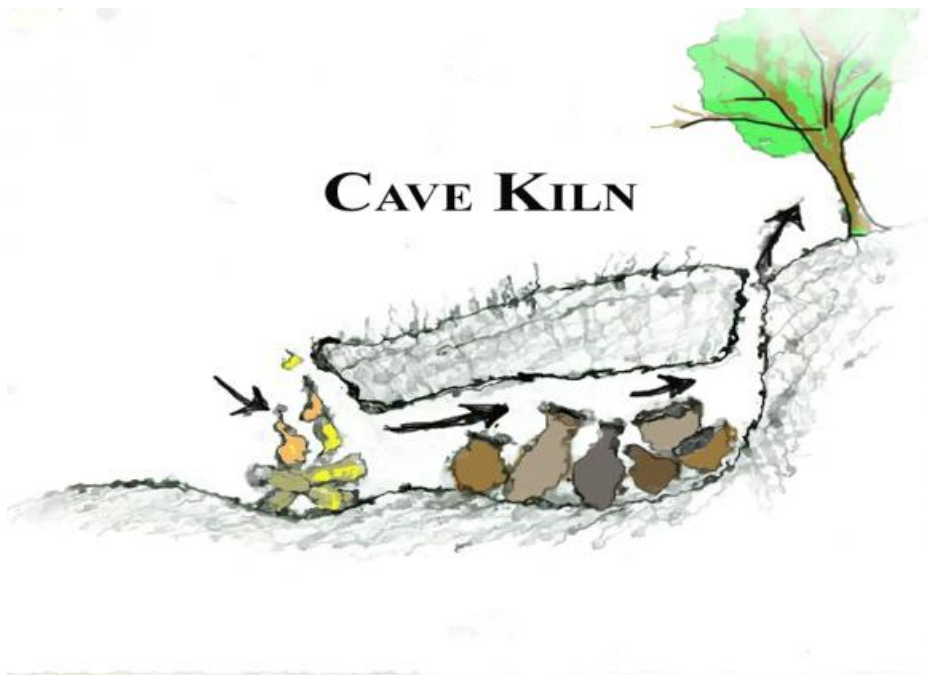
Salt fired pottery by Chris Baskin

FIRING

Even though there are several glaze options out there, the glaze is irrelevant if the piece is not able to be fired. The definition of **ceramics** is products made from fired clay. So the firing of the clay is vital to the process. As we already discussed, the first firings were done over an open flame. This is called an open firing. Potters had limited control of the heat of the flame and the airflow. Often potters would use different materials that would burn at different temperatures. They would also experiment with different methods for arranging the pieces to optimize airflow and combustion. At most, these



pieces were fired to 500° to 800°. This is very low compared to temperatures that modern potters fire their pieces. Potters soon begin to notice pieces with varying characteristics dependent on where in the fire the piece was placed, if the piece had more pieces covering it, and how much airflow it had. It wasn't long before potters begin to attempt to control the amount of airflow that their firings had.



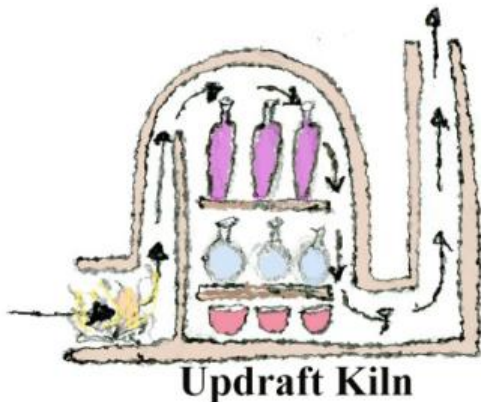
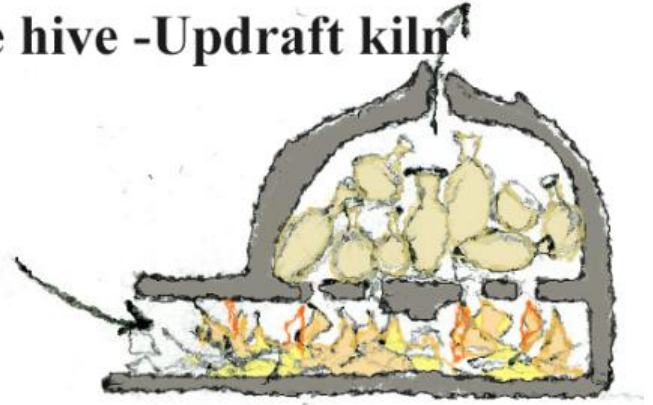
The Kiln

This led to the birth of the kiln. A **kiln** is a furnace designed to fire ceramic products. The earliest kilns were build right out

of the earth. A cave kiln was very common. This type of kiln was simply a small cave dug out of a bank of a river or stream that vented out a hole dug from the top. A fire would be continually fed at its lower opening. Air would be pulled in there by the fire and exit at the top.

Later the beehive style kiln was developed. This design would use a geodesic dome made of clay to cover the pottery. A fire chamber or fire box would be located directly under the pottery. The air flow was similar in this type of kiln except that the size of the opening could be controlled a bit

Bee hive -Updraft kiln



Updraft Kiln

time, have better control over the final product. Most of the early kilns in Ancient Greek, Roman, and Mediterranean societies were updraft kilns. This means that the fumes coming off the fire exit upward out of the kiln. This is the simpler and obvious way to

create a kiln since smoke rises upward. Potters in China and Japan were a bit more innovative with their designs. The constructed kilns that forced the airflow in the and out of the bottom. The tops were completely sealed off this made even greater use of the fuel. These new kilns that could be more precisely fired. These new kilns, coupled with new innovations in glaze technology, allowed for a wider range of colors and textures. Today, there are hundreds of different makers of kilns that are commercially made for potters and ceramic artists. They come in a variety of different sizes and shapes.

Kilns are usually classified by their power source. The three most common kilns are wood burning, gas, and electric. The most common of those would have to be electric. Electric kilns are the most economical and have a much smaller footprint on the environment.

From early man's beginning, we humans have tapped into this incredibly abundant resource. We learned to process it, and then manipulate it into desired forms. Mankind has discovered that different clay bodies have different strengths and characteristics. Mankind has stumbled upon firing clay to harden it into a permanent shape that can serve a multitude of purposes. We have built on the knowledge of our ancestors from all over the world, borrowing from different successes and advancements. Clay has not only served mankind in a utilitarian sense, but it has also served as a vehicle of self expression. It has provided mankind the opportunity to shape and craft something to his/her liking. It has given our minds exercise in materializing a mental image into a three dimensional material. The relationship that mankind has with this mystical, primitive material is just as timeless as it is momentary and it pierces to the core of who we are and where we have come from.



CHAPTER 1 REVIEW

1. What is ceramics?
2. What are some modern uses for ceramics?
3. When do the oldest discovered bricks date back to? Where were they found?
4. How is clay formed?
5. What is the chemical formula for clay?
6. What are some different types of clay and how are they different from each other?
7. What is the oldest piece of intact fired clay to have ever been found? Where was it found? When does it date back to?
8. How did early artists process naturally found clay to prepare it to work with?
9. What are five basic methods for creating pieces out of clay?
10. Give a brief explanation of Pinching, Coiling, and Slab building. What do they have in common? How are they different?
11. When and where did the potter's wheel get its start?

12. Were men or women the first potters? Explain your answer.
13. What is the difference in shape and form?
14. What is burnishing?
15. What is Incising?
16. How is incising and combing different?
17. What is a glaze? When do the earliest glazes date back to?
18. Name and briefly describe four different type glazes.
19. What is a kiln?
20. How has clay served man as a vehicle for self expression.



CHAPTER 2

GETTING TO KNOW THE CLAY

GETTING TO KNOW THE CLAY

While working with clay you will become very familiar with the material and the unique characteristics that can differ clay body to clay body. With time and patience, you will develop your own personal aesthetic. You will learn what to look for in a clay body when doing a specific task. Working with clay can be very rewarding and therapeutic in many ways. However, to stay in the game, it's important to exercise good safety while working with clay. It's all fun and games until someone gets hurt.

CLAY CHARACTERISTICS

Whether you are using preprocessed clay or tailor making your own clay from raw materials you will notice that different clay bodies have different characteristics. The five basic

characteristics to look at when evaluating a clay body are Shrinkage, texture, color, moisture and plasticity. Some clay's characteristics leave them better suited for hand building or sculpture while some are better for wheel throwing. Various clays

also fire differently. Some stoneware can be fired to very high temperatures around 2300 degrees resulting in a very solid, durable, and dense body. Earthenware clays can only be fired to around 2100 degrees. The end product may be more colorful but it won't have the durability of the

CHARACTERISTICS OF CLAY

Shrinkage
Texture
Color
Moisture
Plasticity

stoneware. Basically the more organic matter that is present in the clay the lower the firing capacity of the clay. The trade off for a clay that has limited firing range is that it is often more plastic. **Plasticity** is the property of clay that allows it to be shaped and formed without tearing or breaking. Also, clay bodies like earthenware often have a wider range of colors that occur naturally in the clay.



Successful potters and ceramic artists take time to get to know a new clay body. Understanding the material that you are working with can make a big difference in the final product. Artist, Oliver Van Herpt is creating beautiful ceramics pieces using a 3D printer that is able to work with clay. Obviously, he has a very specific clay body that is able to hold such a large form and yet yield itself to be formed by such sensitive and precise instrumentation.

SHRINKAGE

From the moment that a completed form is placed on the shelf and left unattended the clay begins to dry. While clay is drying water evaporates out of the clay leaving only silica, alumina, and whatever organic matter may be present. As a result, the clay shrinks in weight and size. **Shrinkage** is the



This image shows a mug that has dried, a bisque fired piece, and a mug that has been glazed and fired again.

reduction in size of the clay mass that occurs when water evaporates from the clay during drying and firing. Dry shrinkage refers to the percentage

the clay will shrink from wet clay to drying. You can test

the shrinkage by rolling out a small tile and then measuring it while it is wet. Then simply re-measure when it is dry or after it has been fired. With some simple math you can find the shrink rate of your particular clay. Most Earthenware clay will shrink 6-8 percent while most stoneware has a shrink rate of 11-15 percent depending on what temperature it is fired to. Being aware of the shrinkage that your clay will undergo can help to appropriately size your creations. The larger the piece the more evident the shrinkage. For instance, a 36" tall vase can shrink up to 5.5 inches. Considering that many mugs and bowls are not even that tall its quiet obvious that the larger piece will have more noticeable shrinkage.

TEXTURE

The texture can vary greatly from clay body to clay body. A smooth textured



This photo shows grog being wedged into a clay body.

clay is more suitable for throwing small pieces, making beads, and doing precise work. Course textured clay is better suited for larger applications where small details are not needed. Also many of the additives that make clay

bodies course also give the clay a great deal of strength and at the same time reduce the shrinkage rate. Many potters deliberately add additives like



sand or grog to their clay. **Grog** is fired clay that has been ground down into tiny particles. Pieces that have grog mixed into the clay don't shrink as much because the grog itself has already previously shrunk. Although this reduced shrinkage sounds enticing, grog is not for every clay body. A classically shaped teapot would look

strange with a course clay body. The texture of the clay can totally change the way light moves across its surface. A mature and experienced potter knows what clay texture is appropriate for what project. Compare and contrast the two pictured hand thrown pieces. The choice of clay plays just as much a part of the design as the form



COLOR

Clay comes in many shades. As you discovered last chapter clay is



most pure closest to it's parent source. This parent source is the sight where the clay initially eroded from exposed igneous rock. A **primary clay** is a clay that has the same



This photo shows a limited variety of stoneware color.

composition as its parent source. Porcelain is an example of primary clay. It is very pure and contains very little impurities making the clay have very little color. Most natural porcelains are white. Porcelain pieces are very expensive because porcelain is so hard to work with. However, because of the purity a porcelain piece can be translucent when held up to light. Unlike primary clays stoneware do sometimes have a bit of color. Stoneware which has traveled further way from the parent source may have low levels of other impurities giving them a range of lighter colors. If you are looking for a clay with dark rich colors, you will need to look at earthenware clays. Earthenware clay comes in a variety of colors due to the addition of generous amounts of various other additives like iron, tin, and other metals and oxides. Earthenware also contains varying amounts of organic matter that color the clay as well. Many clay formulas mix stoneware and earthenware to add some color or desired texture while maintaining the strength that comes with being able to fire clay at high temperatures.

MOISTURE

Another characteristic of clay that is worth mentioning is moisture. Moisture is very much related to shrinkage in that as water evaporates it reduces in size. In addition to that the moisture content can be a factor that dictates other attributes of your clay body. The degree of moisture in a clay body is to some degree a preference that changes from person to person. It is often



Baily Pugmill

a compromise in having a clay that isn't too hard or too soft to do the job. For this reason, many professional studio potters prefer to pug their own clay. A

pugmill is a large mixer that is designed to mix dried clay with water and other amendments like sand or grog. There are many companies that mix clay and prepackage it for consumer purchase. I'm sure they are constantly getting customer feedback on the moisture content of their clay. Potters working at a wheel generally want clay that is soft or moist enough to center on the wheel without having to exert excessive force. However, if the clay is too moist it won't hold the shape it is put into. Artists working with slabs may want clay that is a bit stiffer so that it can support its own weight when oriented into vertical forms. There are

definitely limitations to what can be done with clay at various moisture levels but there is also a degree of preference too.

PLASTICITY

The last characteristic to take into account is plasticity. This characteristic is also partially determined by moisture. However, there are two other factors that determine a clays plasticity. **Plasticity** is the property of clay that allows it to be shaped and formed without tearing or breaking. The size of the clay particles is the first variable in plasticity. The smaller the particles the more plastic the clay becomes. The larger the particles the easier the clay breaks when stressed. The second factor is as already mentioned, the moisture content. The more moisture the easier the clay can be shaped. However, for clay to have an ideal plasticity it should not only be easily shaped, but also needs to be able to hold that form. Therefore, too much moisture can ruin the plasticity of a clay. The last factor that determines a clays plasticity is organic material. As organisms and plant life living in our environment breakdown long after they have been alive they mix in with soils and clays. This organic matter often greatly improves the plasticity of clay bodies.

A simple test can be preformed to determine the plasticity of a piece of clay. The steps are outlined below.

1. Get an orange sized ball of clay.

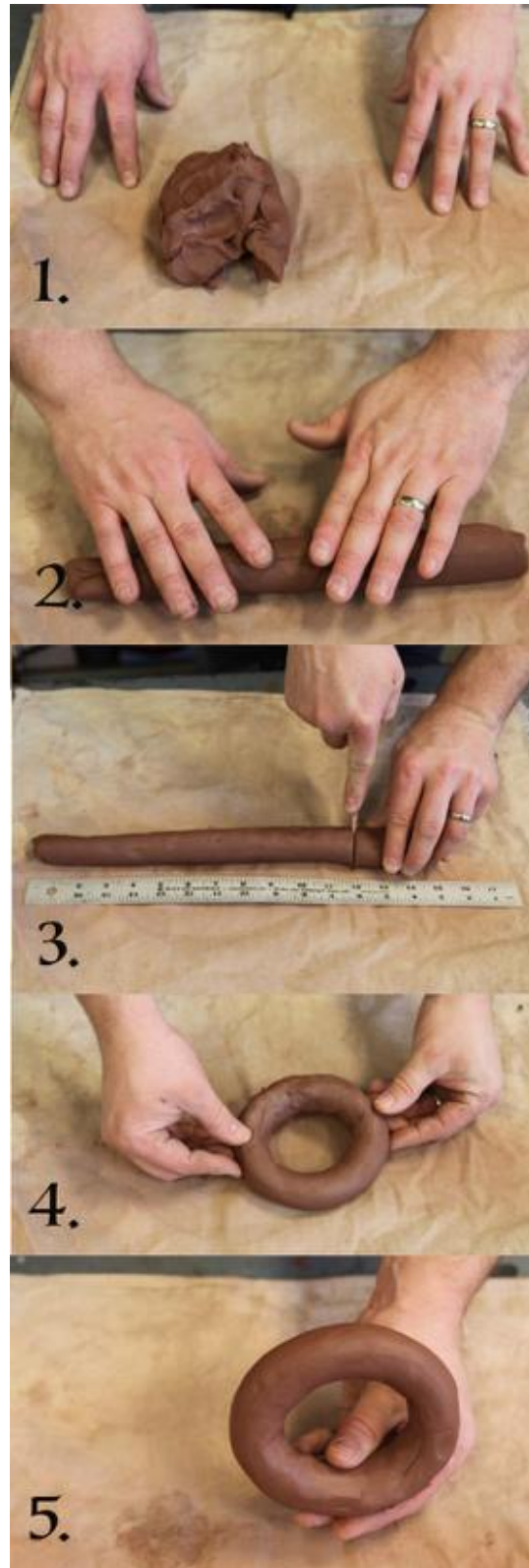
You will also need a canvas or some sort of cloth to put on your table or hard flat work surface.

2. Quickly roll out a thick coil. If you spend too much time trying to make it perfect it will dry out from your hands and the cloth. Drying out the clay would give you inaccurate results.

3. Cut your coil off at one foot.

4. Now take the coil that you have made and form it into a ring.

5. The last step is to hold the ring up vertically from the bottom.



A clay body that has a good plasticity will roll into the coil with little resistance. You will be able to make a ring without the coil cracking. Some clays may crack completely in half. Those clays would not be examples of clay that are plastic. The last thing to look at would be to check that the clay is not so plastic that it does not hold its own form after being put into a ring. A clay that can be easily shaped but cannot retain that shape is of little value. Its remarkable how clay has the capacity to be formed, molded, coiled, or spun into a beautiful vessel but then is strong enough to retain that shape. Taking a chance that a clay is suitable for throwing a large piece can result in tragedy when the piece collapses or cracks to pieces as it dries. It's important to know that you are working with a material that you can trust to hold up against the demands you will be throwing at it.



PREPARING CLAY FOR USE

Wedging is a process that de-airs and thoroughly mixes the clay for an even consistency. There are several methods for wedging the clay. The

1. Gather your materials. You will need the clay of course, a wire tool, and a cloth or canvas to keep the clay from sticking to the table.
2. Cut off a piece of clay that you feel is appropriate for the project you are pursuing. It is hard to wedge a piece that is too small or too large.

As you learn to wedge clay you will learn how much is appropriate for your hands.

3. Ball up the clay in such a way that it doesn't enclose air pockets in the clay.
4. With your arms straight press down on the clay at a 45 degree angle away from you toward the side of the clay you cant see.
5. Grab ahold of the clay as it begins to flatten out going forward.
6. Lift up the now flattened side of the clay so that it is parallel to you vertically.
7. Now press back into the clay at a 45 degree angle downward and forward. This process will feel awkward at first. Watching an



experienced potter wedge will shed light into the process. Repeat steps 4-7 until the clay begins to have less resistance.

8. The finished wedged clay has a face made by the clay folding itself over and over again.

If you notice that the clay is too soft continue wedging a bit. The process will take out some excess moisture. If the clay is too dry you can cut layers of clay that is moist and then sandwich alternate them together. You will then have to wedge again.

AFTER YOU ARE ALL DONE



After you have prepared your clay and then have made a masterpiece you will find that you probably have more clay left over. It is common to see beginners take a good bit more than they need and then make a mess and leave it for others that

use the same space to clean. It is very important to understand that clay can be recycled. In most ceramics classrooms there is a scrap bucket or sometimes several. Clay can be slaked or soaked in water and then mixed with dryer clay in a pugmill. Commercially prepared clays are very expensive it would be a shame to throw away material and money. Keep clay out of the sink. Inexperienced potters might think its wise to clean up by trying to

wash clay down the sink. The heavier particles in the clay will build up over time clogging a drain. Try to minimize how much clay goes down the drain. Many art classes and ceramic studios are equipped with traps to capture this clay that does go down the drain. If you have ever had to clean one of these traps out, you will know that it is not a fun job. They stink so bad. It's not a job for someone with a weak stomach. Therefore, the conscientious thing to do is to not put clay in a sink.



con·sci·en·tious

,kän(t)SHē'en(t)SHəs

adjective: **conscientious** - wishing to do what is right, especially to do one's work or duty well and thoroughly.

CLAY EVERY DAY KEEPS THE DOCTOR AWAY

Clay is a great therapeutic material. Working with clay can be a great stress reliever. Many first timers find it somewhat addicting and can become consumed with projects. Often, we don't have a kinesthetic connection to materials or process in an occupational sense. Many people in this technology driven era sit in front of computer monitors in cubical farms and have no physical stimuli. Clay is a great remedy to many of the stresses we face today.



Clay is a therapist in many senses. For instance, throwing a pot on the wheel can be so mesmerizing, even for the potter himself. You may find yourself thinking about nothing but the connection you are having with the material and how it responds to your actions. The clay records your each and every decision. It does not complain or lecture you on what you are doing wrong. The end result may be good or bad but it's exactly what you made it.

Have you ever met an elderly person who still loves to do projects and physically demanding chores? If you've ever wondered why they still keep going and what is their driving force you are not alone. There is a great sense of pride in completing a task and doing it well. In addition to that, your body releases endorphins when you are in motion and at work. Thus, making you feel good. The same thing happens while working with clay. Bridges to Healthcare a mental healthcare group published an online article called, Neuroscience Could Explain Why Pottery Is Good for Depression, here is an excerpt, "The therapeutic potential of pottery for depression is increasingly being recognized by the mental health community. But how and why does it work? From the effort-driven reward circuit theory that extolls the benefits of manual labor to theories focusing on the biological impact of self-expression, researchers are looking for answers. What ultimately matters, however, is that people are getting better, which is why Bridges to Recovery integrates pottery in depression treatment." Neuroscientist Dr. Kelly Lambert puts it this way. "In our contemporary age, when it's possible to Tweet one's deepest thoughts while waiting two minutes for dinner to warm in the microwave, this circuitry—encompassing a vast amount of 'brain real estate'—isn't often called on to function in coordination and communication, as it seems evolutionarily designed to do. But when we activate our own effort-driven reward circuitry, it squirts a cocktail of feel-

good neurotransmitters, including dopamine, endorphins, and serotonin.”

Famous potter, Mississippian George Ohr once said, “When I found the potter’s wheel I felt it all over, like a wild duck in water,”. The connection man has with this material is hardwired through millions of years of evolution. Neglecting to experience the clay may have consequences that we have yet to discover.



OH WAIT, MAYBE CLAY WONT KEEP THE DOCTOR AWAY.

There are many health risks that one working with clay should be made aware of. Most of the risks are associated with breathing airborne dust from clay, glazes and other ceramic related materials. Other risks to consider are injuries acquired from repetitive movements using bad ergonomics and poor positioning.

Regardless of whether you are a ceramics teacher in a large art department or just a small time hobbyist, there are a few safety precautions that could make a large difference in your health if not implemented.

Air quality is one of the main concerns that a potter or ceramic artist should



give attention to. Clay is relatively safe when wet. But as it dries, it becomes much more dangerous to those who have repeated exposure to it. Clay dust contains silica particles that are very small and since they are so light they can easily stay airborne for days. Breathing in these particles over long periods of time work havoc on the lungs. Your body does not have an effective way to rid these particles from the lungs. They act as an irritant for years to come. They also diminish your lungs ability to properly pull oxygen from the air as they were intended. With long and repeated exposure to breathing clay dust an individual risks having Chronic Bronchitis as well as Silicosis. Acute Silicosis can result in calcifications of parts of the lungs greatly decreasing the functionality of the lungs.

Fortunately, there are several things that can be done to avoid this disease. Keeping your workspace clean is the first line of defense. Any clay scraps no matter how small should be put into a bucket with water to keep them hydrated and unable to cause dust. Clay should be kept off of the floor. Most of the dust in a ceramics workspace initially comes off of the floor. Pieces of clay usually fall on the floor and then are crushed into tiny particles as they are walked on. This dust becomes airborne and then is

breathed in. If it never falls on the floor in the first place the chance of having clay dust in the air is greatly diminished. Ceramics workspaces should be daily carefully swept in such a way that the dust is not kicked up into the air. It is very helpful to have the area mopped at least once a week. Some studios are outfitted with a drain in the center of the room allowing the room to be hosed down. This type setup is very helpful in keeping dust to a minimum. Other precautions that should be followed are running a HEPA (High Efficiency Particulate Arrestance) filter that can filter out as small as 0.3-micron (0.000012-inch) particles. This can greatly reduce the volume of airborne dust in a space.

Ergonomics is also worthy of some consideration. Often people suffer from injuries that are the result of repeated movements that are not good for certain height, size, and body type. Although the world can't be tailor made for each person individually, there are some things that can be done to improve the ergonomics from person to person.

er·go·nom·ics

ˌɜrgəˈnämiks/

noun: **ergonomics**- the study of people's efficiency in their working environment.



Little things can make a big difference in exercising good ergonomics. For instance, it's important to have a workspace that is the appropriate height. In a classroom setting where all the tables are the same height it may be helpful for one to stand on a book or a small stool if they are too short for the table to be at a comfortable working height. On the other hand, if one is too tall for the workspace the worker may want to elevate the project on top of the table to avoid slumping over for long periods of time. Commonly

used equipment and storage areas may want to be elevated to eliminate users from having to often bend down. Stools at a range of heights may help to accommodate tall and shorter people. When it comes to a repetitive action like throwing on a wheel or wedging clay. It is important that your movements are not painful and that you are maintaining good posture through the process. This can save your joints from unneeded wear and tear, lessening the likely hood of arthritis in the future. For better ergonomics the potter pictured here could have elevated the wheel to not have to bend over awkwardly.

TOOLS

The hand is the most valuable tool for the artist. Because the hands are in direct contact with the brain they are quiet capable to completing a myriad of different tasks. As a student of ceramics your teacher may require you to complete several projects using only your hands. This is in an effort to make you less dependent of other tools and more confident with your own tools, your hands. However, as you grow as an artist and your pieces become more sophisticated, you may expand your capabilities with the use of other tools. There are many commercially made pottery tools that can better and more efficiently complete several tasks. Potters have a long history of problem solving often making their own tools. Today, we will take a look at an inventory of several of the more common tools that you may find helpful as a potter and ceramic artist.

1. Stamps can be a great way to add interesting textures to your pieces. Many potters make or have made special signature stamps that easily sign pieces.
2. A paddle that can flatten out areas of a piece can be of use when shaping large areas of clay. This one has a nylon sock over the end so that it doesn't stick to the clay.
3. Brushes of various sizes and shapes are useful when glazing, painting on slip when joining pieces and when smoothing out areas of clay.
4. A needle tool is one of the most often used tools you will use while working in clay. This needle tool made by Sherril Mud Tools is called a Mud Shark. It doubles as a needle tool and a plastic rib.
5. Wood ribs are mainly used by potters working on the potter's wheel to shave off or shape excess clay as the wheel spins. The name rib comes from the fact that early potters used animal ribs to preform this same function.
6. Rubber or plastic ribs can be shaped in the hand as they are applied to the clay surface allowing its user the flexibility to custom contour the silhouette of their pieces.
7. Metal ribs are great for scraping off the soft slurry of clay on the outer surface. They are also great for compressing the bottoms of bowls and plates.
8. Glazing tongs are designed to allow it's user the ability to maintain control of a bisque piece of ceramics while submerging it in glaze.



9. Calipers are designed to make precise measurements in situations where you need to know the relationship of two pieces. For instance, calipers are handy when you are making a top to a teapot.
10. A bump tool is a tool that is designed to shape closed forms by pushing outward from the inside. It is very useful for longneck vases with a small opening.
11. A wire tool is a very commonly used tool to cut clay from a large piece in preparation for making a piece. Also a wire tool is needed when when you are cutting a vessel off of the head of a potter's wheel.
12. A shredder can be helpful when you are wanting to file down a specific area of a



piece. Works the same way as a cheese shredder but is rounded to allow you to file more specific areas.

13. Trim tools of various sizes and shapes are useful when

trimming the bottom of a wheel thrown piece. Trim tools can also be helpful when sculpting clay using a subtractive method.

14. A couple buckets are valuable for keeping clay scraps hydrated that can be processed for later use. Also, a bucket with a lid is a great container to use to store clay while keeping it from drying out. A third bucket is needed for holding water that you will use while throwing on the wheel.

15. Sponges are often used when working with clay. Both hand building and wheel throwing has many applications where sponges are very useful.
16. A banding wheel is a great tool for quickly turning a piece to allow easy access to all sides. Artist find this useful when they are glazing and preforming other surface decorations.
17. A potter's wheel is one of the single most important pieces for the potter. There are many commercially made wheels that range in size and clay turning capacity.
18. A good apron made with split legs for straddling a potter's wheel is a great way to keep clean when working with clay.



You may find it helpful to find a toolbox or other type container that you can put all of your tools in. This toolbox had legs put on it to raise it up a bit making it easier to reach tools when throwing on the wheel. Anything you can do to improve the ergonomics of an activity that you do

over and over will have lasting benefits.

COMPOSITIONAL TOOLS

As an artist your goal shouldn't just be to make pieces that have a utilitarian purpose. Utilitarian is a regard for utility or usefulness. One of the most important goals of an artist working in any medium should be to create pieces that have a beautiful or pleasing aesthetic. Artist create compositions with various mediums. A composition is the placement or arrangement of visual elements or ingredients in a work of art. The elements of art are more or less the conceptual tools that an

artist has in his arsenal to make compositions. Here is a brief overview of many of the common elements.

Line- the path of a moving point. The most obvious line in a ceramic piece is the profile of a piece. Also, lines can be integrated in the surface of a piece in the glazing or throwing marks made by a potter's wheel. Lines can be thick or thin, wavy, curving.



Shape - is an enclosed space, the boundaries of which are defined by another element of art. Shapes can be geometric or organic. The silhouette of an object is the first shape that we recognize.



Secondly, the artist or viewer observes the shapes of objects within the composition such as subordinate parts like handles, bases, lids and other parts that belong to the whole. Shapes can also breakup or pull together the visual flow of a piece.

Form- refers to the whole of a piece's visible elements *and* the way those elements are united in three dimensions. Height, width and depth. Form is the element in three dimensional medias that is the support or foundation for all the other elements that will be integrated into the composition. Form is basically the overall shape of a piece. Many Potters and Ceramic artists are most conscious of their forms, without the form you have nothing but unoccupied space



Value – refers to the range of dark to light in colors or tones.

Various clays are different colors. For the most part the value of a piece will be determined by the glaze choice as well as the way the way shadows wrap around the form.



Texture - refers to the surface quality in a work of art. We associate textures with the way that things look and feel. Everything has some type of texture. The texture may be literal in that it can actually be felt or may just be a visual texture We describe things as being rough, smooth, silky, shiny, fuzzy and so on. Some things feel just as they appear; this

is called **real or actual texture**. Some things look like they are rough but are actually smooth. Texture that is created to look like something it is not, is called **visual or implied texture**.

DEVELOPING AN EYE FOR AESTHETICS

Aesthetics is the branch of philosophy and subject of study in art that deals with issues of beauty such as what is to be considered beautiful and what is considered art.

Aesthetics can vary from person to person. Each and every person has his or her own opinions often they are strong. Most mature artists have a range of styles and looks that they have an appreciation for. Many academics who study art feel that their view of reality and their personal opinions are more valid than the next.

There are people who think that the main purpose of art is to give a critique. As a result, they are constantly critiquing the work of others even when they haven't created any of their own. It will eventually effect a person's outlook if they only look at art with the intent purpose of finding something that they don't like about it to point out.

It takes a lot of bravery to decide that you are going to try to express yourself in a strange or new medium. Learning a new language can be very difficult and even intimidating. The same can be said of learning to express yourself in a new medium. Honestly, it's sometimes scary expressing your thoughts, feelings, and emotions even in your native tongue. There is always a fear that you may suffer some rejection. As a result, many would be artists are discouraged from creating anything that might be near and dear to them. Famous Cubist Artist, Pablo Picasso once said, "All children are artists. The problem is how to remain an artist once he grows up." Picasso was wise enough to realize that children usually don't have a fear of communicating what's on their mind, and what is in their heart. Unfortunately, as a child grows up and experiences the rejection of what they hold in their inner sanctum, they become Jaded to freely expressing themselves.

The great painter Paul Cezanne once said, "Don't be a critic, but paint, there lies salvation." learning to appreciate art for what it is without picking it apart is a very liberating experience. Who knows, there may be some artistry in the way people view the world around them, some people live happy lives despite their situations. Maybe they are better at exercising their artistry in viewing what's around them. The bottom line is that we should make every effort to build up instead of tearing down. We should encourage instead of discourage.

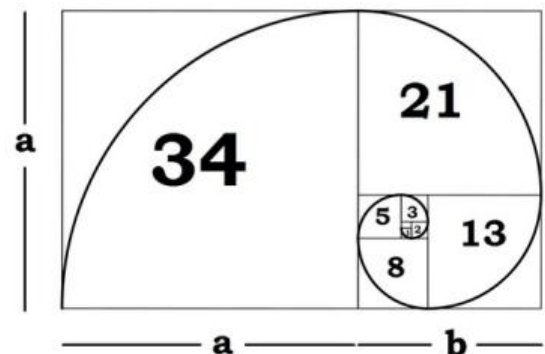
Unfortunately, we know our art will be judged we might as well take some time to look at some commonly held beliefs about aesthetics, what is and what isn't beautiful in the eyes of the masses. It's important to make art that resonates with you the creator but also to consider the audience you will have. The ultimate goal of a ceramics piece should be to balance beauty of form with function. Keep in mind the function could be aesthetic value alone. In that case the art is for arts sake alone. But if you are creating utilitarian vessels form and function must make compromises with each other in order to have a successful piece. Fortunately, function often works well with beauty, take the human form for example. It has been precisely engineered to work as it does and does so with great beauty.

There are several easy concepts to understand that if implemented in your work can give you a leg up in creating a beautiful form that is pleasing to the eye. The following are concepts that can greatly improve the look of your vessels.

The Golden Mean

The Golden ratio is a special number found by dividing a line into two parts so that the longer part divided by the smaller part is also equal to the whole length divided by the longer part. It is often symbolized using phi, after the 21st letter of the Greek alphabet. In an equation form, it looks like this: $a/b = (a+b)/a = 1.6180339887498948420 \dots$

The idea is simply to have a division of space that is pleasing to the eye. An experienced artist is aware of proportions and utilizes them to aid in making more aesthetic shaped vessels. The Golden Mean is a ratio



for proportioning space that has been used for hundreds of years in many mediums. A crude and more simplified idea of this golden mean is simply using the thirds rule. A potter can shape his or her vessels utilizing the rule of thirds or the golden mean as the locations for the narrowest or widest areas of the piece are presented.

THE PRINCIPLES OF DESIGN

The principles of design describe the ways that an artist use the elements of art in a work of art. Balance is the distribution of the visual weight of objects, colors, texture, and space. You might think of it as the principles being your goal to achieve an aesthetic piece, while your elements are your tools that you have at your disposal to work with. Balance is evenly weighting the elements making the design seem stable.

There are two main types of balance. In symmetrical balance, the elements used on



one side of the design are similar to those on the other side; in asymmetrical balance, the sides are different but still look balanced. In radial balance, the elements are arranged around a central point and may be similar.

Which of these photos (to the left and right) do you think

is an example of symmetrical balance and which is asymmetrical balance?



Emphasis is the part of the design that catches the viewer's attention. Usually the artist will make one area stand out by contrasting it with other areas. The area should be a focal anchor but not so distracting from the rest of the composition that it hinders the viewer from noticing other areas of the composition.

The area could be different in size, color, texture, shape, etc. The piece on the left

has emphasis created by a design cut out from the surface of the clay. So your eyes are drawn to the shape made by the void left in the clay. The image to the right is an obvious example of emphasis being made by a black dot surrounded by a red glaze.





Movement is the path the viewer's eye takes through the work of art, often this path can vary from viewer to viewer. Such movement can be directed along lines, edges, shape, and color within the work of art. The most obvious movement is the profile of the form itself. There is a line that is created by the contrast between the form and its surroundings.

Handles, spouts, lips, feet, and other parts of vessels also create movement in a piece.

Pattern is the repeating of an object or symbol all over the work of art. Repetition works with pattern to make the work of art seem active. Here the the throwing marks make a repetitive line pattern up and down the vessel. The repetition of elements of design creates unity within the work of art.



Proportion is the feeling of unity created when all parts (sizes, amounts, or number) relate well with each other.



Rhythm is created when one or more elements of design are used repeatedly to create a feeling of organized movement. Rhythm creates a mood like music or dancing. To keep rhythm exciting and active, variety is essential.

Variety is the use of several elements of design to hold the viewer's attention and to guide the viewer's eye through and around the work of art.

Unity is the feeling of harmony between all parts of the work of art, which creates sense of completeness.

CREATING SUSPENSE

Ultimately the goal of your composition should be to grab your viewer's attention and then to maintain it. Maintaining your viewer's attention is much more of a challenge. Captivating your audience can be accomplished through creating dissonance. When the viewer feels satisfied and comfortable with what they are seeing their attention is quickly averted. People are creatures who like things evenly divided, organized, labeled, and neat and orderly. When a piece of art fits this criteria we are quickly satisfied and comfortable with what we are seeing. We quickly look away to see other things and explore the world around us. However, when there are two or more conflicting elements at play the viewer wrestles with the visual conflict. The viewer's attention is held in suspense. As a result, they are able to notice other elements of the composition that they might not have taken the time to absorb. This is a delicate balance of giving the viewer what they want while withholding just a bit to create a suspense. This is a skill that is cultivated over years of producing artwork.



CHAPTER 2 REVIEW

1. What are five basic characteristics to look at when evaluating a body of clay?
2. What is plasticity?
3. When do the oldest discovered bricks date back to? Where were they found?
4. How is clay formed?
5. What is the chemical formula for clay?
6. What are some different types of clay and how are they different from each other?
7. What is the oldest piece of intact fired clay to have ever been found? Where was it found? When does it date back to?
8. How did early artists process naturally found clay to prepare it to work with?
9. What are five basic methods for creating pieces out of clay?

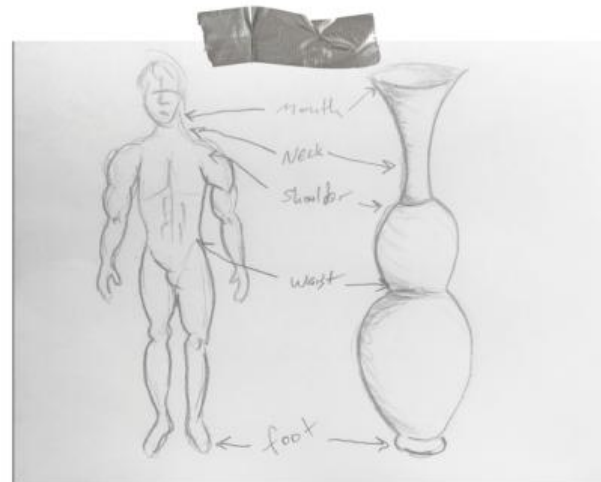
CHAPTER 3

PINCHING

For thousands of years man has used clay all across the globe. Man has utilized many of the same methods to create a menagerie of different type vessels to meet vastly different needs.

A vessel is simply a hollow container that can holds liquid. A vessel is also a boat or ship that can travel across water. In a sense humans are also a vessel both literally and figuratively. We as humans do hold water, considering we are

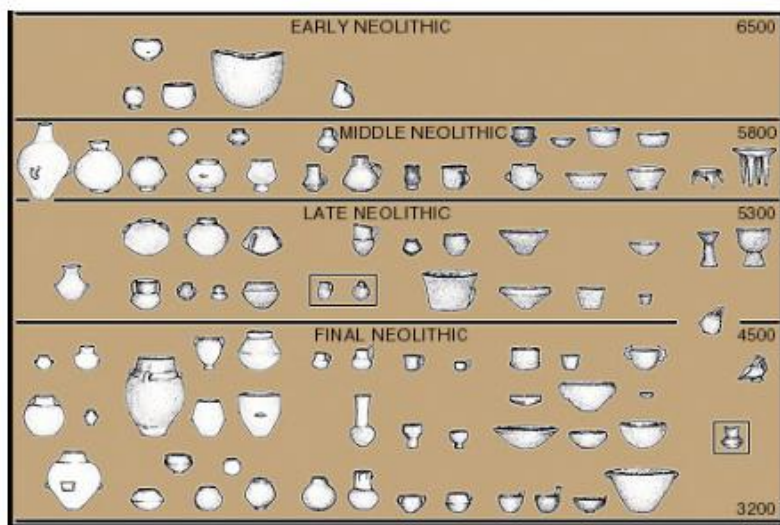
nearly 70% water. Also we are vessels that carry our, thoughts, feelings and emotions. It isn't just a coincidence that we have personified the vessel naming its parts after parts of the



human form. Mississippi potter George Ohr was always comparing his pieces to people. After a fire ravaged the Pot-Ohr-E in 1894 George Ohr sifted through the remains of his studio to preserve the charred remains of his creations. He referred to these pieces as his “Burnt Babies”. Along the same line of thinking he said “I am the apostle of individuality, the brother of the human race, but I must be myself and I want every vase of mine to be itself.” Since the beginnings of ceramics man has created pieces that seem to go on to have a life of their own in the eyes of their

creators. The processes can be very difficult, intricate, and time consuming or can be so simple that a young child can also have success.

In this chapter we will be looking at one of the most primitive of all hand-building methods for creating vessels out of clay. The pinch method was first used during the Neolithic Era. It has been used ever



since to shape and form products born in the minds eye and then materialized in clay. The pieces illustrated here were all created using various pinch

methods over thousands of years. The

Shaping clay using the pinch method is easy even with a large range of clay types. The instinct to pinch is a natural response to the feel of the clay in a person's hands. If you give a child a piece of clay they will begin to pinch and shape it even without instruction. One advantage to pinching verses other methods is that the process is slow and methodical. Working with this process gives the artist time to make decisions and adjustments

about the shape and form of the piece being created. Often potters on the wheel may find themselves in a situation where irreversible changes have been quickly executed on the vessel that were not intended. Therefore, when you pinch you have much more control over the piece. Pinching is slow and steady and very tactile. You must be very deliberate in your actions to alter the clay.

Of course you'll need practice to master this technique. Even if you have never made a pinch pot you will notice a dramatic improvement between your first and fourth or fifth pinched piece. Another advantage to working with the pinching method is that you are born with the tools that you will need to complete the task. Other than the clay, your hands and brain are about all you need. Eyes are quite helpful but not necessary in the process. In fact, a good exercise is to actually try to make a simple pinch pot or bowl with your eyes closed. This activity sharpens the physical sensory response to the feel of the clay.

Pinching may seem very elementary (possibly because that is the extent of the experience that many have had with clay) but it is a very capable method for making very sophisticated pieces. Although the natural response to pinch the clay is very deeply rooted in our instincts there is still much to learn through the process.



HOW TO MAKE A PINCH BOWL

1. Here are some instructions for making a simple, hand built bowl. A bowl made this way is called a pinch pot, because of the way the clay is squeezed between the thumb and fingers to form the walls.



Start with a ball of clay about the size of an orange.

2. The next step to making your pinch pot is to start the opening. Cradle the ball of clay in one hand and gently press the end of your thumb into the clay. A good method is to press down a bit with your thumb and then give the clay a bit of a turn — press down



some more and then give it another little turn. This helps to keep the hole you are making centered and the walls an even thickness. When you sense that you are getting close to the bottom side of the clay ball, stop before you go through.

3. Now the fun part begins — forming your pot! The idea is to gently press the clay from the inside with your thumb against your fingers on the outside. Each time you press a bit with your thumb, give the clay a bit of a turn before you press again. It doesn't matter if you turn the pot clockwise or counterclockwise, just work in a way that seems natural to you.

4. This photo shows the technique from a different angle. If you



curve your fingers slightly, you can control the shape a bit better and make a more rounded form. If your fingers are held flat against the outside, the pot rim will flare out more to make an open bowl shape. Try and shoot for a half sphere shape bowl.

Continue the pinching and turning method until the walls of the pot are thinned out to a thickness that seems about right to you.

5. With a bit of patience and practice, it is possible to make quite a finely crafted bowl with this simple technique. The main thing to remember while working is to try for an even wall thickness as you pinch your way around the bowl.



Use a coil on the bottom to make a little foot for the bowl so that it does not rock back and forth when it sitting on a flat surface.

Date Assigned: _____

Date Project will be graded: _____

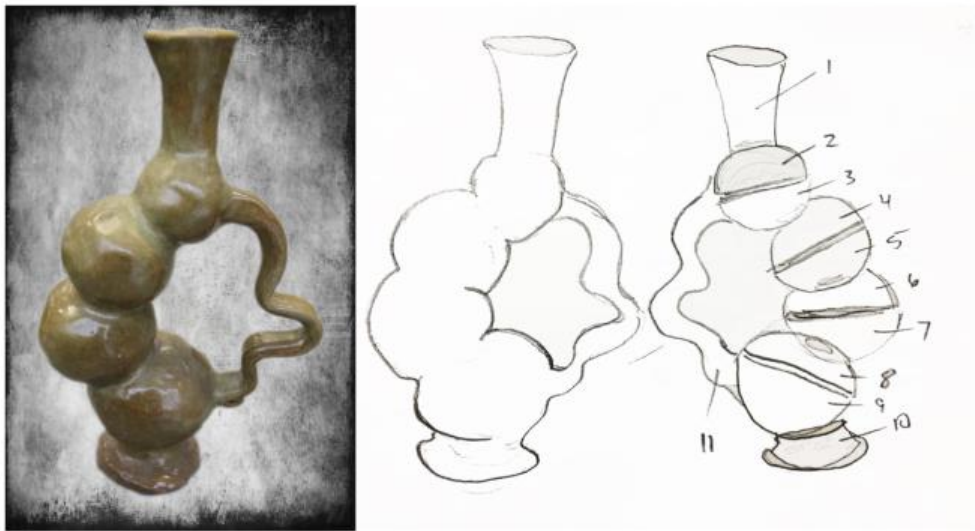
Project Rubric:

Points Your score Criteria

1-25		Walls even thickness from top to bottom
1-25		No cracks or lumps
1-25		Nice looking coil foot seamlessly blended in all the way around
1-25		Name easily read on bottom

Total _____

More complicated forms can easily be made by joining several pinched pieces together by slipping and scoring. It's often smart to start with a sketch that can give you direction and an end product to shoot for. Here you are able to see how the maker of this vessel combined eleven smaller pieces to create a larger and more complicated form.



Each individual piece is still very simple to make, however, by

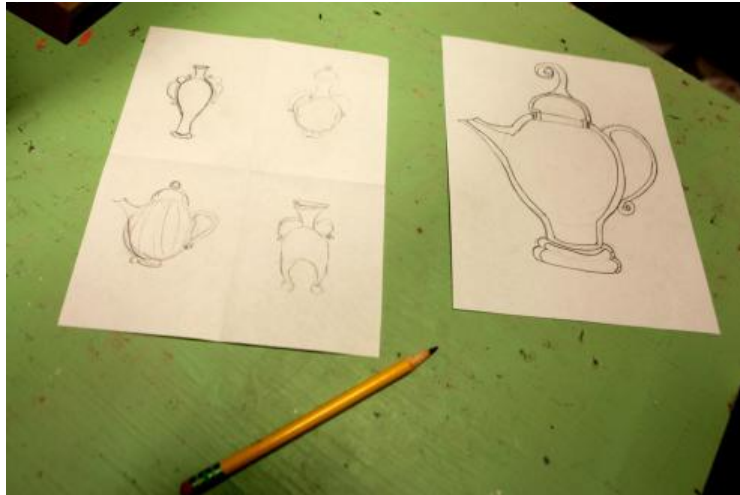


combining sections you can create a much more elaborate type design. Another consideration to make when making pinch pots is the surface treatment that you will have. Pinch pots make great organic shapes that make wonderful surfaces for some interesting surface treatment.

CREATIVE PINCH POT

PRELIMINARY ASSIGNMENT:

Do a Google image search for pinch pots. Fold a piece of paper in half both long and short ways. Use the four equal boxes to sketch 4 ideas on the front and back of your paper. You will have a total of 8 sketches. Show your teacher for approval and then re-sketch your best idea with a more detailed drawing showing a cross section of the piece. You must have sketches complete before you begin working with the clay.



Now that you have had some experience with clay and using the pinch method to create ceramics pieces, its time to create a piece that is a bit more self-expressive!

***For this assignment you are to create a vessel that exhibits the following:

1. Measure at least 7 inches tall
2. Must be a vessel of some sort
3. Must utilize the pinch method as primary method for forming piece
4. Exhibit a high level of craftsmanship
5. Creative and self inspired

Begin with some sketches of different ideas that you have. Once you decide on your favorite sketch, refine your ideas in a larger more polished sketch. Now that you have a plan of what you'd like to make, decide how you will make the piece. Get started!

A *Vessel* is defined as a:

1. A craft for traveling on water, now usually one larger than an ordinary rowboat; a ship or boat.
2. An airship.
3. A hollow or concave utensil, as a cup, bowl, pitcher, or vase, used for holding liquids or other contents.



Date Assigned: _____

Date Project will be graded: _____

Project Rubric:

Points Your score Criteria

1-25		Creative Vessel form
1-25		No cracks or lumps : good craftsmanship
1-25		Atleast 7 inches tall
1-25		Name easily read on bottom

Total _____

OWL PLANTER ASSIGNMENT

Lets face it, everyone likes owls. They are so awesome and cool. They have a cult following that makes women like them for some weird reason. A couple years ago I was featured in the Clarion Liar. The article discusses the owl as a popular motif in arts and crafts. I've begrudgingly put them on mugs for years now. Basically, they are cute and they increase sales.



For this assignment we will be making an owl planter.



Take a ball of clay that is about the size of a tennis ball. Take off 1/5th of the clay to use later. With the larger piece start pinching out a pot shape. Slowly refine your shape by pinching the clay into shape.



Make a slight lip that flares out at the top. Not too much . make two small triangles that will be the ears, two larger quarter size circles, and two smaller nickel size circles, also you need a pencil size coil.



Place the triangles on the lip of the pot both centered toward the front of the pot. Blend the clay together with your finger. Place a coil in place to make the brow let the ends go over the ears blend into place.



Put the eyes in place by putting the large circles on first and then the small.



Use the back of a brush or a pencil to make the irises. Apply the wings and feet you are done. Hip hip hurray!!!!Woohoo!!!!



This is the finished product. Imagine this with a small plant of some sort.
Awesome.



An example of what not to do.

Good luck

Not only is pinching convenient in that it requires no additional tools, it also can create polished refined forms that rival anything made on the potter's wheel. Pinching is a very versatile method for creating vessels of varying degrees of refinement. Pinch pots often deliberately look unrefined and somewhat primitive. However, they can with a little work and effort look very sophisticated.

CHAPTER 3 REVIEW

1. What is a vessel?
2. What do vessels have in common with people?
3. What are some common names of parts of both vessels and people?
4. When were the first pieces of pinch pottery created?
5. What are some advantages of working with a pinch method?
6. What tools are necessary for creating pinch pots?
7. Describe the process of making a simple pinch bowl.

8. Why is it important to place a ring made from a coil on the bottom of the rounded bowl form?
9. Describe how more complicated forms can be made using the pinch method.
10. What do you like/dislike about pinching? Explain your answer.

CHAPTER 4

COILING

Like the pinch technique coiling has also been in practice by potters all over the world for thousands of years. The technique itself is much more versatile than pinching and more easily allows the maker to have pieces that are larger. The method does require more skill but is still easy enough even for even a child to do. The Jomon Ceramic artists from Japan's Neolithic Era are perhaps the first to use coils. There are intact archeological finds that date as far back as 10,500 B.C. Its name is derived from the "cord markings" that characterize the ceramics made during this time. Jomon people were semi-sedentary, living mostly in pit dwellings arranged around central open spaces, and obtained their food by gathering, fishing, and hunting.

All Jomon pots were made by hand, without the aid of a wheel, the potter building up the vessel from the bottom with coil upon coil of soft clay. As in all other Neolithic cultures, women produced these early potteries. The clay was mixed with a variety of adhesive materials,



including mica, lead, fibers, and crushed shells. After the vessel was formed, tools were employed to smooth both the outer and interior surfaces. When completely dry, it was fired in an outdoor bonfire at a temperature of no more than about 900°.

HOW TO MAKE A COIL POT

1. First you will need to know how to make a coil. To make a coil out of clay squeeze a piece of clay into a rough rope shape. Place the clay on a table or flat surface. Using the palm side of your hand roll the clay under your hands using a light forward pressure. If you begin to get flattened coils you are pressing too hard. Try to achieve an even thickness from one side of the coil to the other. Try to go for a coil thickness that is just slightly thicker than a number two pencil.

2. Start out with an 11 inch coil that you spiral around itself to make the base of the coil pot. Now smooth out one side of the base. This will be the side that is on the inside of the pot. This method is preferred by many instead of simply pinching out a base or cutting a round slab to begin. Try to only use coils to make the piece.



3. After you have made the base roll out another coil. Make a ring out of it by blending one end into the other. Place on top of the base. You may have to

play with the length of that first coil that goes on the base. You want it to sit on top even with the outer edge of the base. This sets the stage for all the coils that are to come.

4. Now the hard part is behind you. Simply repeat the last step over and over again adding rings of coils to your pot. It is very important that you blend



each coil into the coil that is under it. If the clay starts to dry you must score and slip each coil as well as blending the interior. **DO NOT BLEND**

TOGETHER THE COILS ON THE OUTSIDE OF THE POT. That would simply defeat the purpose of creating the pot using the coil method. You should see the coils on the outside.

5. Your coil pot must have a base and an additional 15 rings.



Date Assigned: _____

Date Project will be graded: _____

Project Rubric:

Points	Your score	Criteria
1-25		Pot goes straight up and is symmetrical (not leaning or flaring out)
1-25		The interior is blended together smoothly
1-25		Base and 15 additional rings
1-25		Name easily read on bottom

Total _____

Now that you have finished your first coil pot let's take an objective look at how well your piece has turned out. Do your coils have a uniform thickness? Did you score and slip well enough that the coils are well attached? Is the interior of the pot smoothed out and free of cracks and irregularities? What are some aspects of the piece that you feel you could improve on if given the opportunity?

Name: _____

Ceramics

Date: _____

Predetermined Coil Pot Project

Start with a 12' long coil that you spiral around it self to create the bottom of the vessel. After making the bottom make rings out of coils that are the specified lengths as seen listed below? Stack each ring and then smooth it on the inside. You may find a pencil eraser handy for smoothing the coils together on the inside. Start with 1 and work to 24.

1. 7"
2. 7.5"
3. 8"
4. 9"
5. 9.5"
6. 10"
7. 10.5"
8. 11"
9. 12"
10. 11.5"
11. 11"
12. 10.5"
13. 10"
14. 9"
15. 8"
16. 7"
17. 6"
18. 5.5"
19. 5"
20. 5"
21. 5"
22. 6"
23. 7"
24. 8"



Note: Make sure that all coils are blended together on the inside but still visible on the outside.

Date Assigned: _____

Date Project will be graded: _____

Project Rubric:

Points	Your score	Criteria
1-25		Pot is a classic "S" shaped pot
1-25		The interior is blended together smoothly
1-25		Base and 24 additional rings
1-25		Name easily read on bottom

Total _____

CREATIVE COIL VASE

Now that you have had some experience using the coil method to create ceramic vessels, it is now time to create a piece that is a bit more self-expressive and unique!

***For this assignment, you are to create a coil vessel that exhibits the following:

1. Measure at least **7 inches tall**
2. Be a **vessel** of some kind (can hold liquid)
3. Utilize the **COIL** method as the primary method of creating the piece
4. Must have a **minimum** of 3 patterns of coils in the design
5. **Creative** and self-inspired

Begin with 8 sketches of different ideas that you have for this project. Once you have researched different coil pots and have come up with your favorite design, refine it by drawing on a larger, more polished sketch. Now that you have a plan and sketch, get the supplies you will need and get started!

Your imagination is the limit!



Date Assigned: _____

Date Project will be graded: _____

CHAPTER 5

THE SLAB

Hand-building pottery using slabs of clay is an exciting way to create shapes that could never be produced using a potter's wheel or that would be difficult to achieve even with coiling. Slab pots are being produced by contemporary potters in a selection of styles and techniques.

Slab building techniques were used extensively by Mesoamerican Pre-Columbian potters with some beautiful results. Other than these potters, though, slab pots were only minor players in the hand-building playing field of other ancient cultures across the globe.

Today, slab pots and slab-building techniques are



experiencing a renewed popularity. Modern potters and ceramic sculptors have embraced the slab, creating works using both soft slabs and Slabs can be made in a variety of methods. The most common method is to roll out the slab by hand using a rolling pin. Other methods include using: stiff, leather-hard slabs.

Slab rollers, which are large pieces of equipment that enable potters to roll large slabs to uniform thicknesses rapidly.





Extruders are extruded pipe that can be cut through the middle to form a slab.

Hand Tossing. Slabs can be formed by tossing the clay onto a hard surface at an angle. The resulting slabs are not uniform in thickness and can give an organic feel to a piece.



SOFT SLAB CONSTRUCTION:

Many potters have developed a style that uses slabs that have just been freshly rolled out and are still damp.

These soft slabs can be formed into lovely, flowing structures often reminiscent of leather. They can be used with slump molds or draped over hump molds to create repeatable forms, leaving the potter to concentrate more



on finishing the form with surface textures, decorations or firing effects. Slabs can also be formed while soft and then incorporated into a larger piece after they have stiffened to leather-hard.

STIFF SLAB CONSTRUCTION:



The stiff-slab method is more appropriate for architectural and geometric forms. The slab is rolled and then allowed to slowly dry to leather-hard stage before being cut and joined with other stiffened slabs to create the form.

Stiff slab shapes can be merged with other leather-hard clay components, such as stiffened slump-molded slabs, thrown components or pinched components. For example, a soft slab may be slumped into the opening of the stiff slab pot as part of creating a lid for the pot. Another example is the addition of a foot to a stiff slab pot by joining an open-thrown ring to the pot's bottom.

The possibilities are nearly endless.



WALL SCULPTURE SLAB PROJECT

Relief - is a sculptural technique where the sculpted elements remain attached to a solid background of the same material. The term [relief](#) is from the Latin verb *relevo*, meaning to raise. To create a sculpture in relief is to give the impression that the sculpted material has been raised above the background [plane](#).

This relief was made in the early 1500s we are not certain as to who the artist was. Throughout history many artists in all parts of the world have worked in relief to create a full 3dimensional effect on flat surfaces.



Making your own wall sculpture

1. Choose a subject matter that is meaningful to you personally. Try to avoid topics that are common and likely choices. You want to highlight an aspect of you that is unique.
2. Begin with sketching out your ideas. Make several sketch (at least 4) and then with the teachers help choose which to continue pursuing.
3. Redraw your idea more refined and more detailed. Label what areas will be built out from the mass.
4. Choose between a 6'' x 6'' or a 4'' x 8'' format.
5. Cut your chosen size out from a slab of clay that you have rolled out. Try to make your clay 3/8th of an inch thick.
6. Create your image on the clay by attaching pieces of clay. You can shape and mold the pieces you attach as you wish.
7. Be mindful of how you will glaze or paint your piece when you are complete.

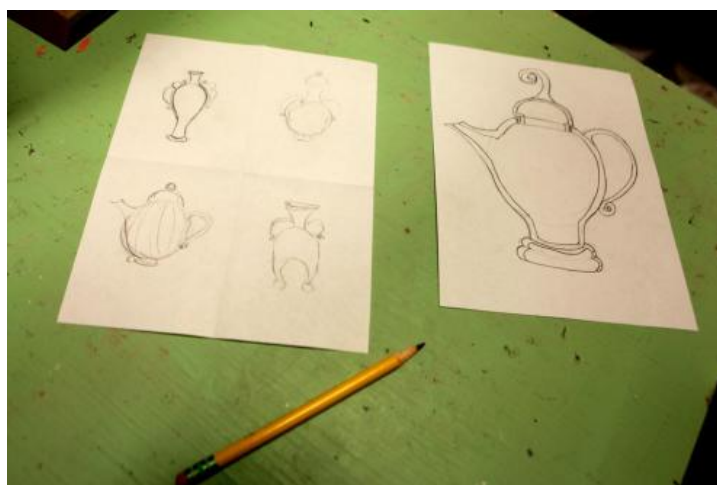


Wall Sculpture Assignment Rubric

Criteria	Possible Points	Earned Points
Good Balance between low and high areas in image	25	
Craftsmanship	25	
Aesthetically pleasing design that closely resembles design	25	
Name easily read on bottom of piece	25	

PRELIMINARY ASSIGNMENT:

Do a Google image search for relief sculpture. Fold a piece of paper in half both long and short ways. Use the four equal boxes to sketch 4 ideas on the front and back of your paper. You will have a total of 8 sketches. Show your teacher for approval and then re-sketch your best idea with a more detailed drawing showing a cross section of the piece. You must have sketches complete before you begin working with the clay.



SLAB BOX PROJECT

CREATE A LIDDED BOX OUT OF SLABS OF CLAY.

Step 1. Roll out a slab of clay using a rolling pin and canvas cloths to keep the clay from sticking to the table.

Step 2. Using a pencil as a knife cut out the following pieces of the box. Make sure that your measurements are correct. I would suggest the following sizes.



Quantity	Size/what it's for
2	4inch x 4 inch square = the two short sides
3	4inch x 5.5 inch rectangle = the two long sides and the bottom
1	4.25 x 5.75 inch rectangle = the top

Step 3. Piece the four sides and the bottom together. Scoring and slipping can help make sure that the pieces stay together.

Step 4. Roll out small coils that you blend into the seams to help hold the box together.

Step 5. The leftover larger piece is the top. You can blend in a coil on the underside of the top to hold the top in place and prevent it from simply sliding off.

Step 6. DO NOT ATTACH THE TOP TO THE BOX. If you do it will not come off. Let it dry separately so that it will not sink in in the center.

Step 7. Think of a theme that interests you; for instance, baseball, music, monsters, whatever you are into. Decorate your box with this theme in mind. No words. We want the message to be implied by the subject matter not spelled out.

Step 8. Make a handle and feet. Make a handle to attach to the lid. Place some clay feet of some sort on the bottom of your box. Feet elevate the piece and give it a sense of prominence and importance.

Step 9. Place your name on bottom of lid and box just in case they get separated.

Date Assigned: _____

Date Project will be graded: _____

Project Rubric:

Points	Your score	Criteria
1-25		Box is straight and symmetrical (not leaning, flaring or balloning)
1-25		The interior is blended together smoothly with coils to join sides
1-25		Creative, well executed theme
1-25		Name easily read on bottom

Total _____

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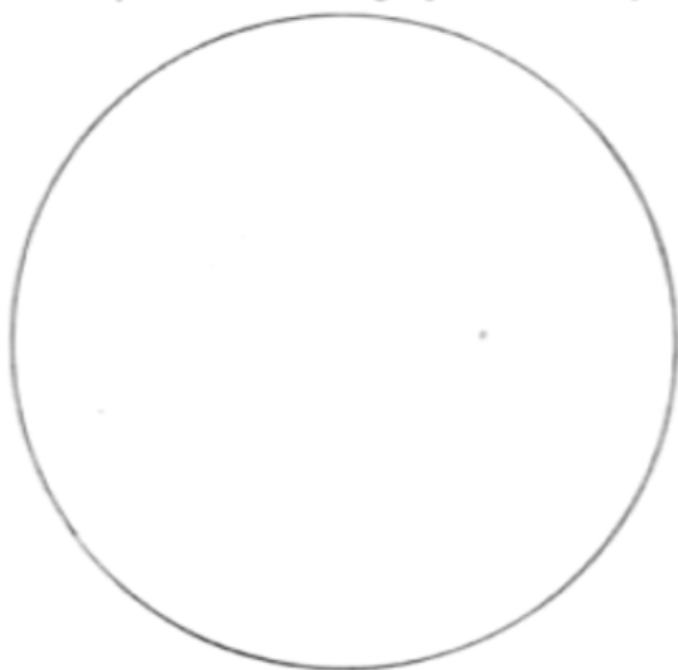
Ceramics

name: _____

Date: _____

Predetermined Slab Mug

1. Cut the following shapes out. They will be used as a template for the mug you are making.
2. Roll out a slab of clay. Make sure to put a cloth down on your work space so that the clay does not stick to the table.
3. Use the shapes you have cut out to place over the clay you have rolled out.
4. Cut the shapes out of clay.
5. Use the pieces and your good common sense to make a mug. Make sure you blend the pieces together well.
6. Spend time concentrating on your craftsmanship.





Date Assigned: _____

Date Project will be graded: _____

Project Rubric:

Points	Your score	Criteria
1-25		Mug is symetrically shaped and seamless
1-25		The edgess are smoothed out and comfortable to touch
1-25		Interesting surface decorations
1-25		Name easily read on bottom

Total _____

Ceramics

Name: _____

Date: _____

FREE PROJECT

By now you have had experience with pinch, coil and slab methods for making ceramics. Therefore, you are now a seasoned ceramic artist. It's time to get creative and materialize something in your mind's eye. What have you been wanting to make? Clay is capable of the wildest materially substantial poetry. The only limitations are the ones you impose on yourself.

1. On a piece of paper sketch out 8 ideas of vessel form that you would like to entertain making out of clay.
2. After consulting your teacher pick the best (most original, Constructible) idea and refine the idea.
3. Your project should utilize only one of the three hand built methods as the primary method of manufacture.
4. Make your creation out of clay.



Date Assigned: _____

Date Project will be graded: _____

Project Rubric:

Points	Your score	Criteria
1-25		Piece resembles original sketch
1-25		Good craftsmanship
1-25		Creative, well executed use of chosen handbuilt method
1-25		Name easily read on bottom

Total _____

PUTTING IT ALL TOGETHER: COMBINATION PIECE

By now, you have made several projects that utilize each of the three different hand-building methods. As you already know, man has been using these methods (pinch, coil, and slab) since prehistoric times. An activity that began as a curiosity quickly became a resource to solve many problems including food storage, cooking, utensils to eat with, and on and on. With the exception of the potter's wheel and the use of molds, there really are not many other techniques to make ceramic products that have very practical applications.

Many artists throughout history in many cultures have utilized two and three of these methods together to make one piece. In fact, most pottery rarely uses only one method for a whole piece. Figure 1 depicts an early wheel thrown Greek pot. With just a glance, it is obvious that the handles are made with coils.



Figure 2 Woman making traditional African Pottery

It would not have been practical for the maker to use the potter's wheel to make the handles as well. A seasoned artist can visualize a form and knows the best and easiest methods to create the piece. In figure 2, we see an African woman using a traditional method to create a huge container to hold grain. The bottom several layers are made with slabs and then she has used coils to achieve the large size you see here. To the right, in figure 3, a teapot has been made that utilizes mostly slabs but also has several pinched features including the finial on top as well as the handle.



Figure 1 Greek pottery 750B.C.



Figure 3 Asian Styled Teapot

Think of slab building, coiling, and pinching as your arsenal of tools to create ceramic works of art. Once you have mastered these techniques, the only ingredients left that are needed to create are some ideas and some inspiration.

"According to the Good Book, we are all created from clay, and as Nature had it so destined that no two of us are alike, all couldn't be symmetrically formed, caused a variety to be wobble-jawed, hare-lipped, cross-eyed, all colors, bow-legged, knock-kneed, extra limbs, also minus the same, all sizes from 30 inches to 75. Everyone of us sees different, has a different voice, and don't all like cabbage or chew tobacco!" The previous quote is from the famous potter, George Ohr. Ohr was a Mississippian who went to great lengths to stress the point that we are all made so differently. His passion as an artist was to make his pottery each so different from the next piece in that same fashion. The hand building methods that you have familiarized yourself with this semester will serve you well as you create your own interesting and unique pieces. What will be your inspiration?



Combination Piece Assignment:

Create your own creative vessel utilizing all three hand-building methods.

Step 1. Start out with some sketches.

Step 2. Use your best judgment and decide which of your ideas will be best for the assignment. Decide how you will make each of the various parts of the piece.

Step 3. Refine your sketch into a more detailed drawing. Label each method and where it is used in the piece.

Step 4. Get some clay and get started. You know how to do this.

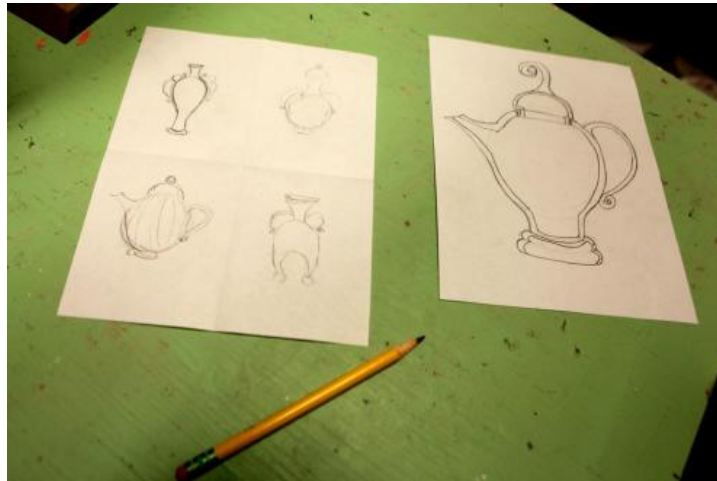
1. Watch your craftsmanship; make sure you are spending the time to create a quality-constructed vessel.
2. Score and slip.
3. Make sure you know what a vessel is.
4. Stick to your plan.
5. Look ahead at the rubric to see how your project will be graded.

Combination Piece Assignment Rubric

Criteria	Possible Points	Earned Points
The use of three hand-built methods	25	
Craftsmanship	25	
Aesthetically pleasing shape	25	
Name is signed on bottom of piece	25	

PRELIMINARY ASSIGNMENT:

Do a Google image search for creative ceramic vessel. Fold a piece of paper in half both long and short ways. Use the four equal boxes to sketch 4 ideas on the front and back of your paper. You will have a total of 8 sketches. Show your teacher for approval and then re-sketch your best idea with a more detailed drawing showing a cross section of the piece. You must have sketches complete before you begin working with the clay.



ANIMAL SCULPTURE PROJECT

Assignment:

Step: 1

On a sheet of blank paper sketch out a few different animals that you feel you could possibly sculpt out of clay. Keep in mind what method you would use to create each part of the animal.

Step: 2

With teacher approval choose from the sketches you have made. Pick which animal you will pursue in your sculpture. Finalize your idea with a larger more detailed drawing. Consult photos of the particular animal if necessary.

Step: 3

Sculpt animal out of clay. Pay extra attention to anatomy of animal. Where possible use correct proportions. Keep project wrapped in plastic bag until finished. Make sure piece is labeled to minimize unintentional handling.



Monkey Sculpture by: Cole Retherford. 2008. ©

CAR PROJECT

Assignment:

Step: 1

On a sheet of blank paper sketch out a few different type cars that you feel you could possibly sculpt out of clay. Keep in mind what method you would use to create each part of the Car.

Step: 2

With teacher approval choose from the sketches you have made. Pick which Vehicle you will pursue in your sculpture. Finalize your idea with a larger more detailed drawing. Consult photos of the particular car if necessary.

Step: 3

Sculpt car out of clay. Where possible use correct proportions. Keep project wrapped in plastic bag until finished. Make sure piece is labeled to minimize unintentional handling.



Hot Rod: J.Rives. 2008. ©



Truck: Alex Mann. 2008. ©

CREATE YOUR OWN CHARACTER

If you were a cartoon character, what would you look like? Draw a front, rear, and both side views of a figure that you will later make with clay. Keep in mind that the figure must be able to stand. Therefore, use appropriate weight distribution. You may keep your character human or you may take the form of a personified, animated animal of your choice.

Here is my example of my photographer dragon.



MAKING A CLAY WHISTLE



1. Equipment



2. Separate clay into two small balls



3. Roll clay into ball. Push thumb into clay



4. Pinch clay to form pinch pot



5. Press until clay is even in thickness



6. Keep all unused clay covered



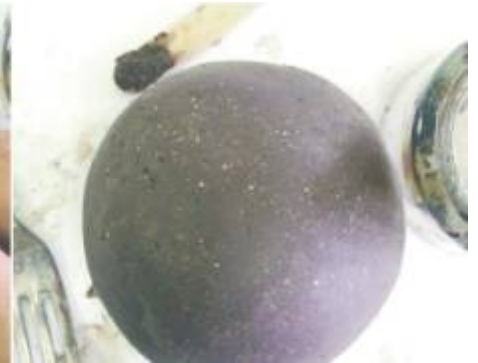
7. Make another pinch pot same size



8. Roughen both surfaces with fork and add water or slip



9. Force two halves together



10. smooth over joints



11. work clay back and forth over joint



12. smooth until no joint is visible



13. fold clay over paddle pop stick



14. should be this thick



15. remove stick from mouth piece



16. make hole with stick at angle
(this will help make it work)



17. remove clay to leave a wedge
shape



18. enlarge hole for mouth piece
and clean up wedge shape



19. position the mouth piece so
air when passing through it will
be split by the clay wedge

20. keep experimenting with the
position of the mouth piece until
maximum sound is achieved

21. score, wet, join and smooth
the mouth piece to the main body

OWL PLANTER ASSIGNMENT

Lets face it, everyone likes owls. They are so awesome and cool. They have a cult following that makes women like them for some weird reason. A couple years ago I was featured in the Clarion Liar. The article discusses the owl as a popular motif in arts and crafts. I've begrudgingly put them on mugs for years now. Basically, they are cute and they increase sales.

For this assignment we will be making an owl planter.



Take a ball of clay that is about the size of a tennis ball. Take off 1/5th of the clay to use later. With the larger piece start pinching out a pot shape. Slowly refine your shape by pinching the clay into shape.



Make a slight lip that flares out at the top. Not too much. make two small triangles that will be the ears, two larger quarter size circles, and two smaller nickel size circles, also you need a pencil size coil.



Place the triangles on the lip of the pot both centered toward the front of the pot. Blend the clay together with your finger. Place a coil in place to make the brow let the ends go over the ears blend into place.



Put the eyes in place by putting the large circles on first and then the small.



Use the back of a brush or a pencil to make the irises. Apply the wings and feet you are done.
Hip hip hurray!!!!Woohoo!!!!



This is the finished product. Imagine this with a small plant of some sort. Awesome.



An example of what not to do.

Good luck

Text found at
<http://www.universityofcalifornia.edu/senate/inmemoriam/PeterVoulkos.htm>

Peter Voulkos
Professor of Art, Emeritus
Berkeley
1924—2002

Peter Voulkos, whose gift for awakening in students a passion for art-making and for living life to the fullest, died on February 16, 2002. At the time of his death, he was conducting a ceramics workshop in Ohio, the last of many master classes in which he made new work in the presence of an audience.

Named Panagiotis Harry Voulkos by his Greek immigrant parents, he was born on January 29, 1924, in Bozeman, Montana. The G.I. Bill enabled him to study painting as an undergraduate and to discover ceramics, which he later pursued for an M.F.A. degree at the California College of Arts and Crafts (1952). Voulkos soon gained national recognition for his large, well-crafted vessels. His career as a functional potter ended, however, after he encountered the work of Abstract Expressionist painters whom he met in New York, particularly Franz Kline; the impact on him inspired him to reinvent ceramics as he knew it, a decision that yielded a lifetime of monumental and bold sculpture that had tremendous influence on the field of ceramic art worldwide.

Voulikos taught at the Otis College of Art and Design in Los Angeles for five years, beginning in 1953. Much has been written about that unique period in which he, his students, and his colleagues essentially raised ceramics to the level of high art.

The University of California, Berkeley, brought Voulikos north in the fall of 1959 to establish a ceramics studio for the Department of Decorative Art, later to be renamed the Department of Design. His arrival could not have been better timed or more enthusiastically welcomed. The "potshop" was located in the basement of the campus housing office, where the Berkeley Art Museum now stands. He made it a dynamic workspace by opening it to students and faculty from the Departments of Art and Architecture as well as Decorative Art, blurring the lines between the disciplines, and enriching the mix of users. The doors to the shop were seldom locked, and there was no shortage of clay.

Voulikos' energy and charisma are legendary. An unusually well-centered person, he had great presence. His lively wit, personal warmth, and mental acuity made him seem larger than life. His way of motivating students was to help them understand that art making was serious business. Voulikos may well have been the least academic of all professors, for he related to students more as a catalyst than as an instructor. He believed that you learn best by seeing for yourself and doing. Asked how something was made, he would show you by demonstrating how it was done rather than telling you. He gave no assignments, leaving the decision on what to make to the student. It should be noted that nearly all the leading ceramic sculptors in America today either studied with Voulikos or were colleagues who had worked alongside him.

Voulikos added to the excitement over clay when he set up a bronze foundry off-campus in the early 1960s, anticipating the day when Wurster Hall would be built and equipped for metalcasting. (His appointment was divided equally between the Departments of Design and Art in 1966. Promoted to full professor in 1967, he joined the Department of Art faculty full-time in 1975.) When he took up casting, he didn't abandon clay, but the bronze occupied him for over a decade. There were both private and public commissions available for large-scale sculptures that would hold their own out-of-doors and that weren't in danger of being broken. Voulikos advocated working large, the bigger the better, and metalcasting made it possible to spread out and engage considerable space. Local examples of his work from this middle period of his career are situated at the entrance to the Oakland Museum of California, in the garden of the Berkeley Art Museum, and outside the main police station in San Francisco.

Ill health made it advisable for him to retire from teaching in 1985. Working full-time in his own building, he returned to clay as his principal medium. From then on, nearly all his sculpture was based on vessel forms. Firing in woodburning kilns gave him new surfaces to explore along with new claybodies that he discovered while working in Japan, namely clay from Shigaraki. Voulikos was not an artist whose creative energy would wane in his late years; if anything, the body of work that he produced throughout the last decade of his life may well be the strongest and mostly deeply felt. His productivity even seemed to accelerate.

There is hardly a major museum in America without a work of his in its collection. The best examples in Europe are at the Stedelijk Museums in Amsterdam and Eindhoven, and at the Victoria and Albert Museum in London. His largest following

abroad has been in Japan, where there are Voulkos works at the National Museum of Modern Art in Kyoto and in the many prefectural ceramics museums that one finds there.

Voulkos' contribution to world art has not gone unrecognized. His first gold medal was awarded him at the International Exposition of Ceramics at Cannes in 1955. He won the silver medal at the Second International Congress of Contemporary Ceramics at Ostend, Belgium, in 1959. The American Crafts Council awarded him gold in 1986, the Everson Museum of Art in Syracuse another in 1994. The New York State College of Ceramics at Alfred University honored him with the Charles Fergus Binns Medal for Lifetime Achievement in Ceramic Art in 1998. He was made an honorary member of the American Academy and Institute of Arts and Letters in 2001.

Voulkos was also the recipient of six honorary doctorate degrees, beginning with Montana State University in Bozeman in 1968. The others are from the California College of Arts and Crafts (1972), the Otis Institute of Parsons College of Design (1980), the San Francisco Art Institute (1982), the Kansas City Art Institute (1998), and Alfred University in New York (1998). Other awards included fellowships: three from the National Endowment for the Arts (1976, 1978, and 1986), and one from the Guggenheim Foundation (1984). The American Academy and Institute of Arts and Letters presented him with the Louise Nevelson Award in 1992, the College Art Association of America with the Artist Award for Lifetime Achievement in 1997.

Voulkos is survived by his first wife, Peggy, and their daughter, Pier; his wife, Ann, and their son, Aris; a brother, John, and two sisters, Mary and Margaret.

PETER VOULKOS

1. Peter Voulkos was said to have had a gift for what?

2. What is Peter's real birth given name?

3. What led Peter Voulkos to ceramics?

4. Describe Peter's style of teaching?

5. Why did Voulkos Retire from his position at Berkley?

6. Describe Peter Voulkos' work.

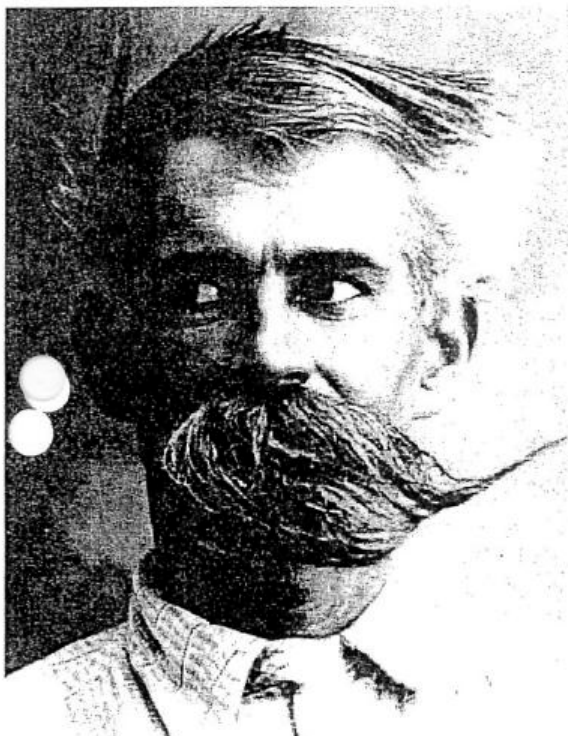
7. How did Peter Voulkos contribute to the history of ceramic fine art.

8. What struggles did Peter Voulkos face early on in his career?

9. How did Voulkos die?

10. Where can you find Voulkos art?

GEORGE EDGAR OHR



George Ohr, c. 1900

Cover Art: Lighthouse Pot, c. 1895

9 1/4" x 8 1/2"

Glazed ceramic

Collection of the Ohr-O'Keefe Museum of Art

Gift of Elizabeth Munro and the O'Keefe Family Foundation

1998.007.001

Selections from Gulf Coast Collections

FROM MORTAL TO MYTHIC, George E. Ohr: *Selections from Gulf Coast Collections* highlights work from the Collection of the Ohr-O'Keefe Museum of Art and private collections across the Gulf Coast Region. George Edgar Ohr (1857-1918), the "Mad Potter of Biloxi", was active in Biloxi from 1883 to 1910 creating innovative ceramics that have become a central part of the artistic heritage of the Gulf South, and the broader canon of American art.

—when I found the potter's wheel I felt it all over like a wild duck in water. —George Ohr

George Ohr began his career working in the centuries-old tradition of providing pottery for his community. As the local potter, many Biloxians turned to Ohr for everyday necessities such as water jugs, flower pots, planters, chimney flues as well as mugs, pitchers and kitchenware. The majority of Ohr's early career in the 1880s was dedicated to the creation of these everyday items which he continued to produce for years to come. Novelty and tourist trade items were also an important aspect of Ohr's oeuvre. He created puzzle "trick" mugs, inkwells, brothel tokens and other playful pieces for sale to the Biloxi tourists and during his travels to the world's fairs. Both utilitarian and novelty items reached a broader audience and the sales from these works helped to support his family.

Shapes come to potter as verses come to the poet. Clay follows the fingers and the fingers follow the mind. —George Ohr

While utilitarian and novelty items supported his family, Ohr's art pottery creations were his true love and vocation. On October 12, 1894, a fire ravaged Biloxi destroying George Ohr's pottery. The majority of Ohr's work was burned with the studio. The pieces or "burned babies" lost in the fire stayed with Ohr for the remainder of his life. After the fire Ohr began to experiment with wild new

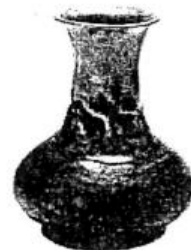


George Ohr surveying the damage after the October 12, 1894 fire which destroyed his studio

forms that were far more experimental than the pottery typical to the day. These pieces created during the years 1895-1903 are considered some of George Ohr's finest work. The hallmark of his art pottery was the combination of vibrant glaze colors with distinctive forms that often exaggerated the traditional styles of the day. The self-proclaimed "Mad Potter of Biloxi" is often considered an isolated and uneducated genius working in a remote area of Mississippi. While Ohr's education and socio-economic background were completely working class, he had access to a long tradition of European and American ceramics. Through his work with Joseph Fortune Meyer in New Orleans and his constant travels to fairs, Ohr was exposed to the foremost artists working in the Arts & Crafts Movement and the American Renaissance, as well as the newest technologies and inventions on view at fairs like Chicago's World's Columbian Exposition of 1893. Ohr is certainly

an "outsider" of the elite Arts & Crafts Movement, but he was not working in a vacuum. To the contrary, Ohr was aware of the prevailing movements of the time and directly rebelling against those ideas.

Many potteries of the late 19th century were run with a variety of specialized workers, separating those that processed the clay, threw the actual pottery and finally the decorators who finished the work. The forms of the pottery tended to be traditional shapes while the artistry was in the decoration or glazing. Even in his working methods, Ohr had a modern approach. Ohr worked as a one man operation heralding the studio potter movement of the 20th century. Ohr dug and processed his own clay with only the help of his apprentice Henry Portman. He threw all of his own pottery and was responsible for its glazing and decoration. Ohr certainly found his process superior to that of many art potteries of the day



Vase, c. 1895
Glazed ceramic
9 1/8" x 3 3/8"
Collection of the Ohr-O'Keefe Museum of Art
Gift of the estate of Hollis C. Thompson, Jr. in
memory of Evelyn Desporte Thompson, Mrs.
John (Nickie) O'Keefe, Tine Lancaster and
Annette O'Keefe
1999.001.006



Petticoat Vase, c. 1898
Glazed ceramic
7 3/4" x 4 3/4"
Collection of the Ohr-O'Keefe Museum of Art
Gift of David Whitney in honor of Frank and
Berta Gehry
2003.012.001



Pitcher, c. 1895
Glazed ceramic
Height: 9"
Private collection, Biloxi, Mississippi
2003.563.001



Three-spouted Cadogan, c. 1895
 7 3/4" x 10"
 Glazed ceramic
 Private collection, Biloxi, Mississippi
 1999.545.008

as he stated: "...in Don't Take A Doz' to Accomplish Art Pottery---Originality does not Emanate from A Company or regiment..." For Ohr, the artistry was the complete process with special focus on the form of his work.

Colors or quality--counts nothing-in my creations. God put no color or quality in SOULS—George Ohr

In approximately 1905 George Ohr stopped glazing his pottery leaving it in the bisque form. This last period represents the most abstract, sculptural ceramic objects Ohr created. Soon after 1905, disillusioned with his lack of success, Ohr stopped potting all together and by 1910 his studio was disassembled and his work packed away. For the majority of the 20th century Ohr's work stayed a footnote in the history of American art. It was not until the 1970s that George Ohr was widely recognized for his innovative style and mastery over the clay medium.



A souvenir postcard of the "Biloxi Art Pottery" from the late 1890s



Vase with In-body Twist, c. 1900
 6" x 3 3/4"
 Glazed ceramic
 Collection of the Ohr-O'Keefe Museum of Art
 2002.024.001



George Ohr outside of his Biloxi studio

GUEST CURATOR

Anna Stanfield Harris is a freelance curator and lecturer from Biloxi, MS. Harris received a Bachelor of Arts from Hollins University and a Master of Arts in art history from Boston University. Her recent exhibitions include: *George E. Ohr: Mischievous Master*; *On the Midway: George Ohr's Journey into a New Century* and the traveling exhibition *George Ohr Rising: the Emergence of an American Master*.

GEORGE E. OHR

The Mad Potter Of Biloxi

Gallery

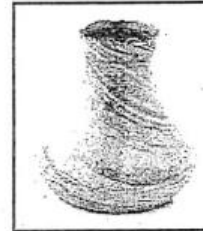
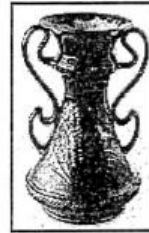
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George E. Ohr

D E T U P S I D N U E D G A R
 R E H P A R G O T O H P D U F
 T E N D R I L H A N D L E S L
 B U C K S H O T F L U X O E A
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 Q O J O S N A E L R O W E N M

ARTIST-POTTER
 BUCKSHOT-FLUX
 EDGAR
 LEO
 MISSISSIPPI
 NEW-ORLEANS
 PHOTOGRAPHER
 TCHOUTACABOUFFA
 WORLDS-FAIR

BIZARRE
 EARTHENWARE
 GEO
 LIO
 MOUSTACHE
 OJO
 POT-OHR-E
 TENDRIL-HANDLES

BLACKSMITH
 ECCENTRIC
 GULF-COAST
 MAD-POTTER
 MUD
 OTO
 RIVER
 UNDISPUTED

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Peculiarity and Insularity, 1890-1930

IN THE 1880S AND 1890S, as southern leaders sought to reestablish pre-Civil War institutions under different names, nostalgia for the "lost cause" of the Civil War surfaced across the South. It produced a sectional cohesion known as the "solid South," united in its support of racial segregation and based on social patterns characterized by "a sense of order, deference to authority, tradition, a martial spirit, and unquestioning allegiance to the nation."¹ Moreover, an aggressive and moralistic Protestantism became virtually a civil religion tying together white Christian churches and southern culture.²

Throughout the solid South, this particularly conservative society made political revolt and racial reforms difficult. By the 1890s forces were underway in the North to ameliorate many of the injustices that industrialization had set in motion and problems that expansion had produced. Americans turned to political action through populism to reclaim democracy and the economic parity it promised. The rise of militant unionism and radical reform movements transformed the nation. Another decade would pass before these social and political transformations reached the South.

Mississippi had its own forces that ultimately led to populist reform. Ray Skates has characterized the path these forces dictated as a "different road that led to peculiarity and insularity."³ After the Democratic coup in 1875, entrepreneurs and legislators devoted time and money to industrial development in the state: railroads, textile and lumber mills, cottonseed-oil factories. But cotton

maintained its stranglehold on the economy. Despite much rhetoric about agricultural diversification and capital investment in factories and railroads, Mississippi's energy continued to be spent primarily on cotton. It formed the basis of the credit system that sustained the state, it was the crop that everyone knew how to grow, and it was part of the "lost cause" nostalgia. Four million acres of rich lands in the interior north Mississippi Delta, at one time impenetrable, were made available through levee building, timber cutting, and railroads. The new cotton kingdom moved upriver to the Delta, where, as with the original cotton empire of the Natchez District, cotton became central to the culture. One resident observed that in the Delta cotton was not just a crop but "a form of mysticism . . . a religion and a way of life . . . omnipresent here as a god is omnipresent . . . omnipotent as a god is omnipotent, giving life and taking life away."⁴ Cotton created a great deal of wealth for Delta landowners, as it had for the planters in the old Natchez District. Cheap labor was made available through the sharecropping system, which became in effect a new kind of slavery, victimizing the poor, black and white alike. In a state of overwhelming poverty, the prosperity of the Delta pitted the planters against the small farmers of the hills. This disparity of income caused political and social divisions, and, as the national movement to revitalize democracy sifted down, economic and political reforms were attempted in Mississippi. The period from 1902 to 1923 became known as "the redneck era," based on a term that the politicians

William Woodward, *Biloxi Art Pottery*, 1890s. Oil on canvas, 48 1/4" x 63 1/4". Collection of the Biloxi Public Library, on loan to George Ohr Art and Cultural Center, Biloxi.

of "the common folk" assigned themselves. The victory signaled by the election of James K. Vardaman as governor and the rise of Senator Theodore G. Bilbo would have been a shining example of populism had not the black people of Mississippi been excluded. The "redneck era" was virulently racist and paradoxically progressive in its accomplishments: its achievements included increased funding for public schools, abolition of the convict-lease system, improvements in public health, curbs on the power of big business, and the passage of child labor laws. The tragedy for Mississippi was that by leaving out African Americans (three-fifths of the population) the reform measures did not bring about real progress. Mississippians failed to recognize the link between black oppression and economic depression.

POPULISM IN ART

In the last decade of the nineteenth century, the revolt and change going on in American society could be seen in American art. Regenerative social and political forces produced a new cultural flowering in the United States. The urge to create something unique to this country was renewed, and artists again turned to American life for inspiration. While some, like Thomas Eakins, adhered to academic styles, and others, like Childe Hassam, embraced impressionism, a new interest in America was apparent, embodied as well in the paintings of Winslow Homer and Eastman Johnson. The work of these artists indicated a renewed native vitality.

The search for beauty in one's natural surroundings sprang in part from the arts and crafts movement, which flourished in America from about 1876 to 1916. The notions expounded by William Morris in Great Britain took hold in the United States as part of the reaction against the excesses of high Victorian taste. The movement was a return to the principles of handicraftsmanship and design of the premachine age. One of the most vocal proponents of the new aesthetics was Oscar Wilde of Great Britain, who made a lecture tour of the South in 1882. Wilde urged his audiences to appreciate the role that beautiful decorative art has in human sensibility and to look for beauty in their natural surroundings. After visiting Texas and New Orleans, he lectured in Vicksburg on the night of June 14 and visited Jefferson and Varina Davis at Beauvoir on his way

to Mobile the next day. The Vicksburg newspaper was more concerned with Wilde's wardrobe and appearance than with his speech, describing in great detail what he wore when he arrived on the morning train and his evening attire at the opera house where he spoke. The reporter, however, found his speech inspiring and his theory "beautiful," especially his "glowing tribute" to the South. "This part of America," Wilde said, "should be essentially the land of art, the home of song, and the cradle of beauty of all this broad continent." Other passages were quoted by the newspaper: "We have much to learn in art, but fashioning our taste more upon the correct rules of beauty, and borrowing our themes of handicraft from the blending of forest, flower, stream and crag that lay all around and about us, we may yet reach an eminence in the art world deserving of our destiny, and worthy of the lavishness that nature has poured into our laps."⁵

A Mississippi potter from the Gulf Coast, using native clay, would soon startle the world of decorative arts with his talent. George E. Ohr (1857-1918) of Biloxi has been identified as the "first of the artist-potters in the United States, and arguably the finest."⁶ Ohr was the son of young German immigrants, Johanna Wiedman and George Ohr, Alsations who had moved to Biloxi after a brief stop in New Orleans, their port of entry in 1853. The elder Ohr established the first blacksmith shop in Biloxi and later opened the first grocery store there.⁷ His son, George Edgar Ohr, grew up to be a flamboyant and memorable figure in his hometown. After learning the smithy trade from his father, the younger Ohr left for New Orleans, where he worked as a ship's chandler, finally signing up aboard a sailing ship. He did not enjoy sea life and returned to Biloxi to work at a variety of odd jobs, none of which appealed to him.

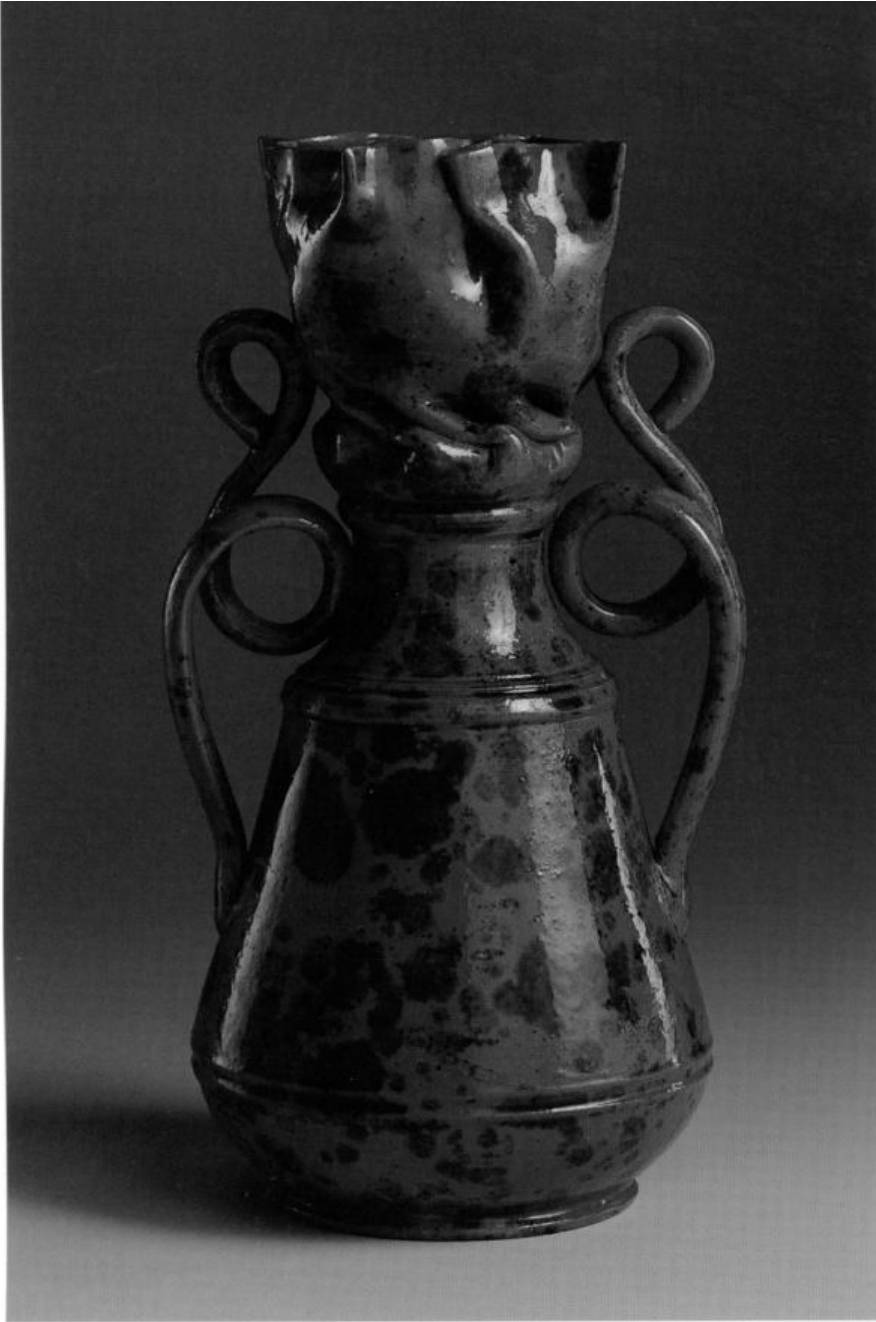
Around 1879 a family friend from Biloxi, Joseph Fortuné Meyer, offered Ohr a job as an apprentice potter in New Orleans. It set the course of his life. George Ohr later wrote, "When I found the potter's wheel I felt it all over like a wild duck in water." After he had learned his craft, he left New Orleans for a two-year, sixteen-state tour of potteries in the United States. He returned to Biloxi and built his own pottery. Having fabricated all of the ironwork, made the potter's wheel and kiln, and built a shop from



George Ohr, pinched pot, c. 1900. Ceramic with glaze, h. 9". Collection of Mississippi Department of Archives and History, Old Capitol Museum of Mississippi History.

lumber that he had rafted downriver, he got to work, using clay from the Tchoutacabouffa River. When the 1885 World's Industrial and Cotton Centennial Exposition opened in New Orleans, he was able to show some six hundred completed pieces. Before he could get them back to Biloxi, the pieces were stolen in their crates.

The exposition, however, brought Ohr good luck in other areas. He courted a young German woman from New Orleans, Josephine Gehring, whom he married in 1886 in Biloxi. The exposition also sent his career briefly in a new direction. As a spinoff of the fair, the brothers William and Ellsworth Woodward created the New Orleans



George Ohr, vase, c. 1900.
Glazed ceramic, h. 10".
Collection of the Mississippi Museum of Art.
Purchase.

Art Pottery and hired Joseph Meyer as an assistant. Meyer again invited Ohr to work with him. From 1888 to 1890, Ohr worked in New Orleans throwing huge garden pots and jardinières, competently done but with no hint of his later virtuosity in creating delicate, imaginative pots. After the Woodwards were given the responsibility of organizing the art department for Newcomb College, the art pottery folded. Ohr returned to Biloxi and again went into serious production for himself. Biloxi Art and Novelty Pottery, as he called his pink shop, was in no time crammed

"rustic, ornamental, new and ancient shaped vases, etc." As he made his pots, he also created for himself a wildly eccentric persona—that of a brash and mischievous artist, wearing flowing beard and hair, hooking his moustache over his ears. He brought a show-business flavor to his shop, which became an established tourist attraction on the Gulf Coast; fascinated visitors could watch a virtuoso performance by the "mad potter of Biloxi" and buy a memento of their trip.

In the fall of 1894, a fire wiped out the pottery along with twenty other business establishments in Biloxi. George Ohr rescued some of his charred "clay babies," as he called his pots, and began anew. That winter he rebuilt a grand new pottery with a five-story tower shaped like a pagoda and called it Biloxi Art Pottery Unlimited. "I brood over [each pot] with the same tenderness a mortal child awakens in its parent," he said in an interview. He soon had his tourists back.

In the meantime, Joseph Meyer became potter at Newcomb College and again asked Ohr to work with him in New Orleans. From 1897 to 1899 Ohr divided his time between Biloxi and New Orleans, trying to supplement his income for his growing family. His fourth and last child was born in the fall of 1895.

His molded wares, some scatological, some whimsical, some decorated in relief with local scenes or classic floral motifs, were popular with tourists and Gulf Coast residents. But his extraordinary skill on the potter's wheel also brought him to the attention of the ceramic art world. He threw delicate, thin-walled pots which he manipulated into exotic forms by twisting, denting, ruffling, and folding the clay—"no two alike," he proclaimed. Ohr's serious creations did not find popularity with the public. The Victorian art pottery of the day was carefully controlled and decorated. Ohr's energetic and expressionistic treatment of clay was too outré for most tastes. His relatively subdued glazes and his virtuoso throwing technique were admired by ceramics critics and by potters who knew his work through exhibits at expositions and fairs. At the 1904 St. Louis exposition, he won an award for the most original art pottery. He was called "one of the most interesting potters in the United States" in a ceramics journal, and the famous ceramics

teacher Charles Binns, giving lectures at Alfred University in New York, cited Ohr as a genius.

Ohr was passionate about his work and supremely confident in his talent. He wrote to an art critic, "I am making pottery for art sake, God sake, the future generation, and—by present indications—for my own satisfaction, but when I'm gone (like Palissy) my work will be prized, honored and cherished."⁸ In 1899 he packed up eight pieces and sent them to the Smithsonian "and the people of America," where they were not valued. They still remained unaccessioned in 1978 when Mississippi's Old Capitol Museum staff mounted the first museum exhibit of Ohr's work. One of the pots sent to the Smithsonian was inscribed, "I am the Potter Who Was."

Ohr gave up his profession as potter in 1909, perhaps as a result of his disappointment with an uninterested public and condescending critics. The famous ceramic shop landmark became Biloxi's first auto repair shop, run by his sons. Urged by his family to sell his pots, Ohr instead packed up the several thousand pieces that he could not or would not sell, confident that the world would someday recognize him as "the greatest art potter on earth." He died of cancer in Biloxi in 1918.

The artistic acclaim that he had envisioned began a half century later. In 1968, James W. Carpenter, an antiques dealer from New Jersey looking for old cars, happened upon the crates of pots stored in the Ohr Boys' Auto Repair Shop. He subsequently bought the entire cache for fifty thousand dollars. As the pots came onto the market, art pottery collectors were intrigued, art historians had to reevaluate his importance, and his pots began to sell for thousands of dollars. Perhaps fittingly, an homage from one artist to another kicked off the Ohr craze. The salute came through an exhibition of paintings in New York. Jasper Johns, a major American painter who was fascinated with the pots of George Ohr, used several of them as central images in his new work in 1984.

Today Ohr is a cult figure in New York's art world. Who could resist work that one contemporary critic describes as "boldly fixed at the extreme of chance, spontaneity, natural asymmetry, calculated imperfection, rustic vigor, wit, and mischief"?⁹ His hometown of Biloxi, once indifferent to his art, has established the George E. Ohr Arts and Cultural Center. The center has

adopted the antic spirit of the man it honors, calling its newsletter *The Crack'd Pot* and its annual fund-raiser the Mad Potter's Ball. Mississippi Educational Television produced a feature film on Ohr in 1993.

Joseph Fortuné Meyer (1848–1931) and his family, like the Ohrs, had come from Alsace to live in Biloxi. His father, François Antoine Meyer (d. 1870), opened a store on Back Bay where he made pottery around 1848. Joseph learned his father's craft and the use of natural resources in the area, helping his father locate and dig clay from the banks of the nearby Tchoutacabouffa River. George Ohr, who also dug and floated his clay down the Tchoutacabouffa, no doubt learned about the clay source from the Meyers. A hurricane destroyed the Meyer store and pottery in 1860. (A half century later, workmen excavating at a Back Bay shipyard discovered pottery shards that the local newspaper, apparently oblivious to their own topography, described as "artistically carved pottery . . . [that] leads those who have seen it to believe that 'cliff dwellers' resided in Biloxi at one time." Joseph Meyer's wife quickly identified the pottery as her father-in-law's "strange designs."¹⁰) Soon after the 1860 hurricane destroyed François Meyer's store, the Civil War came to the Gulf Coast, creating economic disaster with a sea blockade. François moved to New Orleans and opened a shop in the Vieux Carré, making and selling utilitarian pottery. Joseph, age fourteen, remained in Biloxi and supported himself by rowing deserters and Unionists to Ship Island, held by the Union. He rejoined his family in New Orleans when Federal forces departing from Ship Island for New Orleans took him along.¹¹

A few years after the war, François opened a boot and shoe store on St. Bernard Avenue in New Orleans, and Joseph worked alternately at the pottery and at the shoe store. Sometime around 1879 Joseph Meyer invited George Ohr to come to New Orleans to learn the potter's trade and make a small salary doing it. Ohr happily moved to New Orleans to start his apprenticeship. Meyer was a fine traditional potter who turned out solid, practical wares. Ohr wrote of his admiration for Meyer: "There was a spice to his conversation peculiarly wise and shrewd . . . living almost to the condition of penury, yet withal a most delightful host."¹² Meyer closed his

GEORGE OHR

After reading the text on George Ohr answer the following questions to the best of your ability.

1. Why was the “Solid south” united?
2. Who did Oscar wilde visit in Vicksburg?
3. Who is the first of the artists-potters in the United States?
4. Who said “When I found the potter’s wheel I felt it all over like a wild duck in water.”?
5. How many pieces did the younger Ohr show in the 1885 worlds industrial Cotton Centennial Exposition?
6. What was Biloxi Art Pottery Unlimited Shaped Like?
7. How did the time period & shift in art Aesthetics affect Ohr’s pottery?
8. Who informed Ohr of the Tchoutacabouffa River as a source of clay?
9. Of what decent was George Ohr?
10. Where did Ohr seek the beauty that inspired his works?
11. Where was George Ohr born?
12. When Was Ohr born?
13. What type of pottery did he make?
14. What were some of the uses for his potter?
15. When was the great fire at his studio?
16. What did he call the burnt pieces?
17. What did he do with all of his burnt pieces?
18. What is the period of time where Ohr Created his finest work?
19. What was his self proclaimed title?
20. How many people worked at his studio?

21. Where did Ohr get his clay?

22. What did OH do or not do to his pottery in 1905?

Ceramics

Name: _____

Date: _____

Go to the website ceramicartsdaily.org. Click the "daily" tab at the top of the web page in the turquoise menu bar.

CERAMICARTDAILY.ORG

Scroll down to "glossary." It will bring up a web page of vocabulary words. Write the word and definition to the word on a sheet of notebook paper.

- | | |
|-------------------------|---------------------|
| 1. Acids | 33. Flue |
| 2. Air-floated | 34. Fly-ash |
| 3. Air-set | 35. Foot |
| 4. Albany slip clay | 36. Fritting |
| 5. Alkaline | 37. Green/Greenware |
| 6. Annealing | 38. Hand-building |
| 7. Banding wheel | 39. Impressing |
| 8. Barrel arch | 40. Inclusions |
| 9. Bases | 41. Kaki |
| 10. Black-figure style | 42. Matt Glaze |
| 11. Blackware firing | 43. Maturity |
| 12. Blistering | 44. Mishima |
| 13. Burnishing | 45. Nuka |
| 14. Car kiln | 46. Oxidation |
| 15. Carbon coloring | 47. Oxide |
| 16. Celadon | 48. Patina |
| 17. Charge | 49. Platelets |
| 18. China clay | 50. Pugmill |
| 19. Chuck | 51. Refractory |
| 20. Collaring | 52. Scoring |
| 21. Combing | 53. Setting |
| 22. Combustion | 54. Sgraffito |
| 23. Convection currents | 55. Sieving |
| 24. Crazing | 56. Viscosity |
| 25. Cullet | 57. Wax Resist |
| 26. Dearing | |
| 27. Devitrification | |
| 28. Draft | |
| 29. Dunting | |
| 30. Earthenware | |
| 31. Fettling knife | |
| 32. Flame-flashing | |

Go back to the website's main page, and on the turquoise menu bar, click "Ceramics Monthly." You will be taken to a gallery of ceramic artwork. Choose one of the artists, and then choose one piece of art. First, describe it in as much detail as you can. Secondly, tell me what you like about it. Choose one you really like, not just one to hurry up and finish with. You may be asked to make something similar....

Day of the Dead

Name _____ Block _____



What is the Day of the Dead Holiday?

Day of the Dead, or Día de los Muertos, is a ritual celebrated in certain areas of the United States and Central America, and Mexico.

Festive gathering takes place every year on November 1st (All Saints Day, or El Día de Todos los Santos)

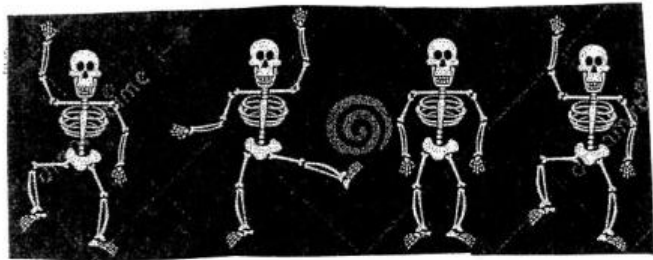
and November 2nd (All Souls Day, or El Día de los Muertos). The Day of the Dead originated from the indigenous population in Mexico (Purepecha, Nahuatl, Totonac, and Otomi), who believed that the souls of the dead come back to visit their living family members every November 2nd to eat, drink, and be in a merry mood. The celebration is to remind those who are still living of how it was when their loved ones were still alive. The entire Día de los Muertos holiday is filled with a positive feeling, rather than mourning.

The indigenous people in what is now called Mexico had been practicing a ritual for at least 3000 years. This ritual changed after the Spanish Conquistadors landed somewhere in Mexico more than 500 years ago. The Spaniards were willing to get rid of the celebration that looked like they were mocking death. Thus, they tried to annihilate it and were unsuccessful at it. The Day of the Dead celebration was evolved by merging with Catholic theology.

Using Skulls for Día de Los Muertos

The Aztecs and many other Meso-American civilizations kept skulls, which symbolize death and rebirth, displayed them for others to observe. The skulls were utilized to honor the dead, whom were thought would come back to visit the Day of the Dead ritual. In today's times, these skulls are made with sugar, and decorated with sequins, tinted frosting, feathers, and other elaborate decorations. The sugar skulls, which are made in many sizes and colors are displayed over the Day of the Dead holiday as a symbolic nod to the traditional past.





Embracing Death for Day of the Dead

The indigenous people, pre-Hispanic people, viewed death as the continuation of life. In contrast, the Spaniards felt death as the end of life. The pre-Hispanic people embrace death; thus, they idealized it thinking that's when they would be truly awake. Moreover, death was embraced, not feared. Duality was honored as being dynamic by the pre-Hispanic people. For example, they did not separate death from pain, wealth from poverty like the Western cultures has done.

Spaniards Wanted to Change

The Spaniards considered the rituals to be blasphemous. The pre-Hispanic people were considered barbaric and pagan. So, in the Spaniards' attempts to convert them to Catholicism, the ritual was attempted to be vanished.

However, they failed and the Day of the Dead rituals lived on. The celebration was moved to coincide it with All Saints' Day and All Souls' Day to arrange the ritual to have more traits in common with Christianity.

Antecedently, it fell on the ninth month of the Aztec Solar Calendar, which is about around the commencement of August. The ancient festivals were presided over by the goddess Mictecacihuatl, also known as "The Lady of the Dead." The story is about her being dead when she was born.

Present-day Mexico and the Day of the Dead

On the Day of the Dead holiday in Mexico, the streets near the cemeteries would be filled with decorations of papel picado, flowers, candy calaveras, and parades. Families of the dead make altars and place offerings of food such as pan de muertos baked in shapes of skulls and figures, candles, incense, yellow marigolds. The altar, called an *offrenda*, must also have a photo of the deceased displayed next to it.

For the celebration, skulls are decorated with bright colors with the name of the deceased inscribed on it. The processions have children carry yellow marigolds to the cemetery. To honor the spirit, people enjoy themselves by having music to play and dance to it.

The Day of the Dead is a celebration of loved ones who has already died. It has evolved from a ritual that the Aztecs started, who weren't afraid of death. Thus, the holiday involves some props that have death-related meanings. Skulls are the most conspicuous decoration that honors the dead.

Name

Date

Block

Answer the following questions.

1. What does Día de los Muertos mean?
2. What countries celebrate the Day of the Dead?
3. What calendar dates are used to celebrate the Day of the Dead?
4. What is November 1st called?
5. What is November 2nd called?
6. What does the celebration remind us about death?
7. How long have people been celebrating this festival?
8. In what country did this tradition begin?
9. What group of people tried to annihilate the tradition?
10. Why did they want to end the Day of the Dead?
11. Were they successful?
12. Why are skulls important in the festival?

13. What are sugar skulls?

14. How did pre-Hispanic people view death?

15. How did the Spaniards feel about death?

16. How did the pre-Hispanic people and the Spaniards resolve this problem?

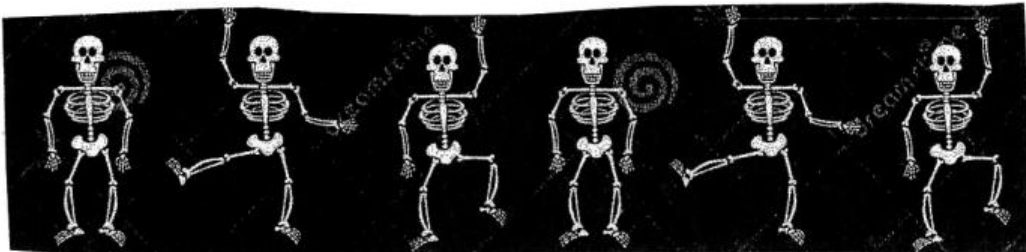
17. In present day Mexico, how do the people decorate the cemeteries?

18. What do families of the dead do for their deceased relatives?

19. What does the Day of the Dead celebrate?

20. Would you like to go to Mexico to see the Day of the Dead festivities?

Our next project will be a slab project. We will make flat skulls and decorate them like sugar or candy skulls.





Day of the Dead Celebration Word Search Puzzle

T	N	G	O	S	Z	F	S	J	S	S	C	A	C	P
B	R	F	L	D	T	K	O	A	U	L	D	O	A	A
A	R	E	V	A	L	A	C	G	C	N	X	O	N	N
P	O	A	G	C	W	O	A	S	E	T	A	T	D	D
S	A	W	U	R	A	R	G	R	V	X	Y	I	L	E
K	K	P	F	I	C	R	F	I	A	U	T	L	E	M
S	R	W	E	A	U	O	R	C	R	J	Q	E	S	U
F	Z	B	N	L	W	Y	A	I	U	A	Y	G	W	E
H	B	E	L	L	P	O	K	I	Z	I	M	N	N	R
A	E	C	A	T	R	I	N	A	V	O	X	A	J	T
Z	D	C	U	A	L	F	C	L	A	P	O	C	M	O
Z	R	J	R	L	F	E	E	A	L	B	M	Y	I	C
L	C	A	S	E	I	P	C	M	D	O	U	C	W	L
D	D	R	J	S	U	X	O	T	D	O	S	W	S	S
B	T	M	L	T	D	E	Y	O	B	V	A	Q	F	L

ANGELITO
CARRIZO
MARIGOLD
PANDEMUERTO

CALavera
CATRINA
OAXACA
PAPELPICADO

CANDLES
COPAL
OFRENDA
SUGARCANE

ADDING ELEMENTS TO YOUR FORM

All of the following elements add interest and extend the functionality of your pots. For example, lips and feet may be considered minor pieces of information, but they can have a staggering influence over the personality of your piece. With the addition of a lid, a cylinder can become a covered jar.



LIPS & EDGES

Rim, lip, brim—these terms refer to the edge of a pot, that area of transition where the outside and inside of a form meet. This seemingly insignificant part of a pot's anatomy is often overlooked or neglected and must be thought through from the start. No matter how great the pot or how strong the proportion, pattern, or color, if the rim is scruffy and neglected, it'll detract from the overall appearance.

The rim must be considered at the pot's very conception. If it's not, the rim will not only look like an afterthought, weak and unsure of itself, but you may not have left enough clay to make the design statement that you suddenly envisioned. It's as vital a design aspect as a handle, foot, or lid, and so must be given equal consideration. There are dozens of options to consider. Look at any vessel in any material and you'll see rims in a variety of shapes, sizes, and thicknesses. Some are quite decorative; others are large and make a bold statement. More often than not, and especially in the case of drinking vessels, a simple smooth, thin edge is all that's required to make a satisfying finish. Unless deliberately designed, sharp and ragged edges can be displeasing and should be avoided for utilitarian ware. Smooth, rounder edges are not only more tactile and inviting but less likely to chip. Study objects in the natural world—the edges of leaves and shells, the rhythmic order of petals and buds—and harvest from them clues and solutions for your work.

A very thin lip can give the illusion of a lightweight pot, while a thick lip will imbue the form with a heavy, more solid quality. Rims can be highly decorative or plain and simple. Between these extremes there are many individual variations to explore. Here's a selection of ideas to whet your appetite and get you started. Consider the practical needs of your pot as well as its character, and design the lip accordingly.

Some points to remember:

- »» Level the top of the pinch pot before shaping or adding to the rim. Do this by holding the pot at eye level and trimming off the high areas with a sharp knife, scissors, or needle.
- »» If the clay is too dry, pinching and shaping the rim will cause it to crack and split. This can be exploited for a decorative effect.
- »» Let the piece rest and firm up. This will give you more control over shape and thickness. Don't try and do it all in one go.
- »» All cut edges can be softened with the tip of a finger dipped in water.
- »» The rim isn't exclusive to a bowl or a mug; it's the fitting around a lid and the edge of the lid itself. No matter what the vessel, it's the place where inside and outside converge.



SCALLOP RIM



RIPPLE EDGE



FRAYED EDGE



CUT EDGE



PIERCED EDGE



A Simple, Thin Lip— Spare & Elegant

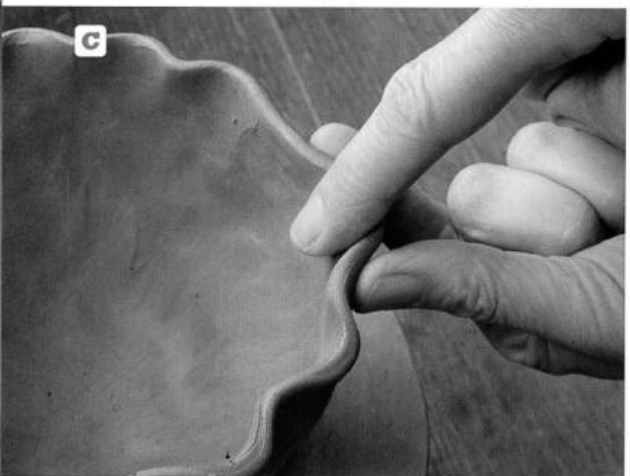
The pinching and thinning of the rim should be addressed only when the main pot shape has been established. While the clay is still soft, equal pinching pressure between your thumb and index finger is sufficient to thin the rim [A]. Any inward or outward tilt to the rim must be made before the clay gets too firm, as then the rim becomes difficult to pinch and unwanted splitting may occur. If you don't want a wavy, undulating edge, trim the rim level before it gets too thin. Now is the time to use a hacksaw blade or similar tool to shave away unwanted clay.



A Thicker Rim—A Couple of Ways to Get One

The simplest method for creating a thick rim is to not pinch the rim at all until you've finished shaping the pot. When you're ready to deal with the rim, it should first be trimmed level, then turned outward or inward, or left straight. You can further define the rim by pinching just below it, not so much thinning the clay as making a more distinct separation between the rim and the wall of the pot.

A second option for a thick rim is to add a coil [B]. This method is very versatile and will allow for more control and variation. The soft coil can be added to any part of the rim, but be sure that you firmly attach it and then smooth in all the seams. Once joined, the coil can be flattened, bent, folded, crimped, textured, and patterned.



A Ripple Edge— Endless Options

There are many variations on this piecrust effect, but all of them must be carried out when the clay is still very flexible. Adding a soft coil onto the pot is an option, but very often the lip of the original pot is still malleable enough to work with. Results will differ depending upon the thickness of the clay.

A traditional wavy edge, sometimes seen on flowerpots, is achieved by pulling the clay rim outward with the swift tug of a finger. The thumb and index finger of one of your hands are placed slightly apart on the outside of the rim. From inside, push the clay into the space using the thumb or

FEET & FOOT RINGS

There is no rule that a pot has to have a foot ring or feet; a flat base is perfectly sufficient. However, the addition of a built-on foot offers the exciting opportunity to play with aesthetics. No matter the size of a pot, form, function, and proportion will be affected by the addition of feet.

For very little effort, inclusion of a tall foot will naturally increase the size of your piece, thereby amplifying the sense of drama, too! But feet can also be subtle, creating a quiet lift to the form. Even the smallest elevation can change the entire perception of a piece.

There are inverted feet, which are only visible when the pot is turned over and appear as hollowed-out rings or dimples. This feature is more properly called a foot ring. Look at the bowls and cups in your kitchen; they're likely to have this kind of detail.

Whatever kind you choose, feet are best added when the pot is leather hard. Always use the same clay as the pot for your feet and for the joining slip. Employ a banding wheel when you're no longer manipulating the piece in your hands. Continued finishing of the foot ring can be carried out when the clay has become leather hard—just be sure to wrap the main body of the pot in plastic while the foot is firming up.

Here I've proposed a selection of simple feet that you might like to try. Naturally, the scale and proportion can be adapted to suit your needs. Some shapes, such as the bowl and the trumpet, can be combined to make more complex foot combinations in which the foot becomes more a pedestal. Pierced, textured, or carved, the edges of these feet are finished in the same way as rims—the potential is enormous. I hope you'll continue to investigate the possibilities.



DOUGHNUT FOOT



COILED FOOT RING



NODULE FEET



POD FEET



TALL FOOT



PINCHED BOWL FOOT



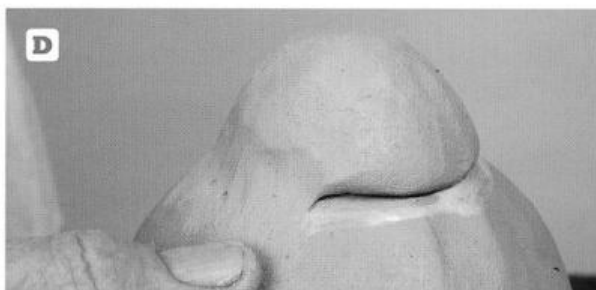
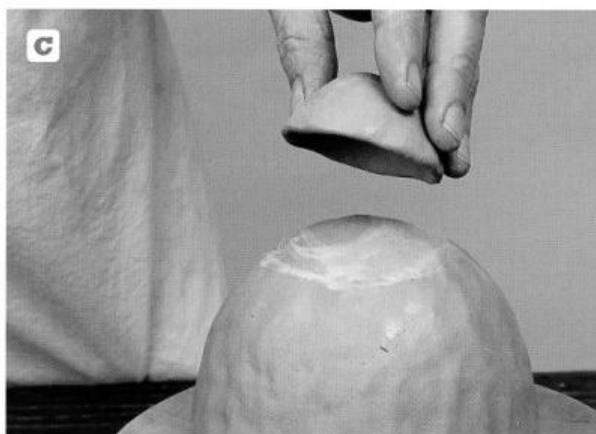
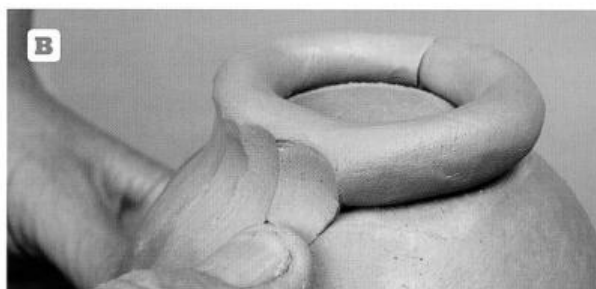
PUSHED OUT FOOT

A Simple Coiled Foot Ring— Elegant & Understated

- 1 Once your pot is almost leather hard, roll a very soft coil of clay as long, at least, as the diameter of the bottom of your pot. Place the coil onto the base of your pot in a circle **[A]**, marking off its position with a pencil or stick.
- 2 Add slip to the marked area, and, in an all-in-one movement, press in the coil from the sides while forcing it gently downward. This will straighten the sides and stop the coil from becoming overly squashed.
- 3 Trim off the end of the coil, blending the clay in where the two ends meet.
- 4 Thumb the outside of the coil downward onto the pot, easing and blending it in **[B]**. Use a wooden tool if it's easier. Decide if you want the foot taller, shorter, curving outwards, or inwards, and adjust the profile as necessary. Stand the pot up to check its balance and overall appearance. Trim off any unwanted clay, making sure to smooth the cut edge.

The Doughnut Foot— Plump & Pneumatic

- 1 Pinch a fairly thick, soft bowl.
- 2 Position the bowl on the bottom of the pot and mark the joining area with a pencil **[C]**.
- 3 Add slip to the pot and gently press the bowl into place, being careful not to dent the middle. Smooth in the clay around the join—the bowl should now look like a bulge **[D]**.
- 4 With the fleshy pad of your thumb, begin to press in the center of the freshly joined bulge using small rhythmic movements **[E]**. One violent press and the bulge may pop. Rotate the form while you continue shaping. You should only need to work the inside of the foot. Aim for a neat, circular depression. The outside rim should look full and inflated.
- 5 Stand the vessel up, supporting it while you check that it's level. To release the trapped air, use a needle tool to pierce the base of the foot ring when it's leather hard.



Nodule Feet— Eye-Catching Yet Organic

The method is the same regardless of the number of feet.

- 1 Pinch off three equal-sized lumps of clay and roll them into balls.
- 2 Use a pencil to mark off the places on the base of the pot where they are to be joined, checking that they're equally spaced for stability.



- 3 Slip the contact area and press the balls into place. Ease the clay around each ball down onto the pot and smooth it in. A damp finger is a good tool for smoothing and shaping each nodule. For visual strength, the thickest part should be where the foot grows out of the pot. Support the pot in your hands while you establish the balance and check the level [F].

TIP: For longer feet, increase the amount of clay, and, instead of making the clay into ball shapes, roll it into a coil and then cut it into equal lengths. Affix the lengths in the same way as described above, making sure not to over thin the area at the join. If desired, you can carve and shape the feet as they become leather hard.

Pod Feet—Sturdy & Bold

- 1 Round off three or more lumps of clay and start pinching as if you were making mini pinch pots. The lumps can be shallow and round or long and torpedo shaped. Pinch with the appropriate pressure to get the result you want.
- 2 You have two choices as to when to join the feet to the pot: now, while they're still soft, or later, when they're firmer. It's a personal choice. I like to join the feet while they're still relatively soft, as this allows me to manipulate the shapes as well as their angles in order to get a well-balanced result. Either way, select and mark with a pencil the position of each foot.
- 3 You may find it helpful to trim the opening of each foot at a slight curve that corresponds to the angle of the pot. Slip and then join, thumbing in the clay at the seam. In this case, a flared edge on the rim of each foot will allow for better joining [G].

NOTE: Don't forget that these are hollow shapes and at some stage in the drying must have a needle poked through them to allow the air to escape.

A Tall Foot— For Dramatic Elevation

Make a tall foot from an open-ended tube. It'll be trial and error as to how much clay you'll need.

- 1 Pat the clay into a round-ended log.
- 2 Press a thumb or finger into one of the ends to create an opening. If it doesn't go all the way through, pierce through the other end with a finger.
- 3 I tend to start pinching the widest end first, but there's no rule. Work back and forth between the ends, checking the overall proportion by holding the foot up to the vessel. If creating a very large piece, you can let the foot dry separately until it's almost leather hard; this may make it easier to join.
- 4 Slip both parts before assembling and use a soft coil of clay to reinforce the seam.

Pinched Bowl Foot— A Sturdy Pedestal

- 1 Make a pinch bowl. From the beginning, have in mind the size and shape of the bowl intended. Do you envision it deep and tall, or shallow and wide? Gauging the amount of clay needed will be a case of trial and error. Use your first attempt as a guide.
- 2 Trim the edge of the foot if it is very uneven. When you're satisfied with the shape, flip it over and join it, bump to bump, so to speak, with slip to the base of your pot. If the pot's base is very rounded, you may want to shave it down to something flatter, giving it a greater contact area. This will help in the joining. Press the two shapes together from the insides of the pots. Be gentle but firm.
- 3 Stand the pot up to check that it's level and stable.

- 4 Unite the two shapes further by pressing a soft coil of clay into the outside join, thumbing in the clay to the pot and down onto the new foot. Further finishing can be carried out when the foot has become leather hard [H].

Pushed-In Foot— Quick & Simple

- 1 Pinch and shape your pot, making sure to leave some thickness at the base. Allow the shape to firm up just a little; the clay needs to be soft but not wobbly.
- 2 Press the pad of your thumb or index finger into the center of the base, using a gentle, circular motion, as if cleaning a window. Slowly rotate the pot as the depression widens and deepens; it should start to look like a small bowl. Dampen your finger if it keeps dragging, but don't let the clay get soggy. Keep a check on how much you're stretching the clay—you don't want to burst through to the inside!
- 3 Inside, you'll see a hump in the bottom. Don't fiddle with it. Any interference and it will lose its fresh, organic quality. This inner bump can be an interesting feature in bowl and cup designs. Stand the pot up and carefully correct the level of the new foot ring by patting the base gently on the table.



Ceramics

Name: _____

Date: _____

PROJECT EVALUATION SHEET

Assignment Name: _____

Sketch piece below	Evaluative Checklist
	<p>Possible 10 points for each category</p> <p>_____ 1. Acceptable Thickness</p> <p>_____ 2. Acceptable height and diameter</p> <p>_____ 3. Form</p> <p>_____ 4. Smooth and finished look to footing</p> <p>_____ 5. No rough or unfinished areas</p> <p>_____ 6. Signed with first and last name and dated</p> <p>_____ 7. Cracks repaired</p> <p>_____ 8. Resembles original idea</p> <p>_____ 9. Glazing</p> <p>_____ 10. Creativity and aesthetics</p>
	<p>Comments:</p> <p>_____ Grade</p>

Method(s) used to create this piece:

My inspiration for this piece was

Check one:

- I am satisfied with this piece
- I am not satisfied with this piece

Explanation of comment:

Ceramics

Name: _____

Date: _____

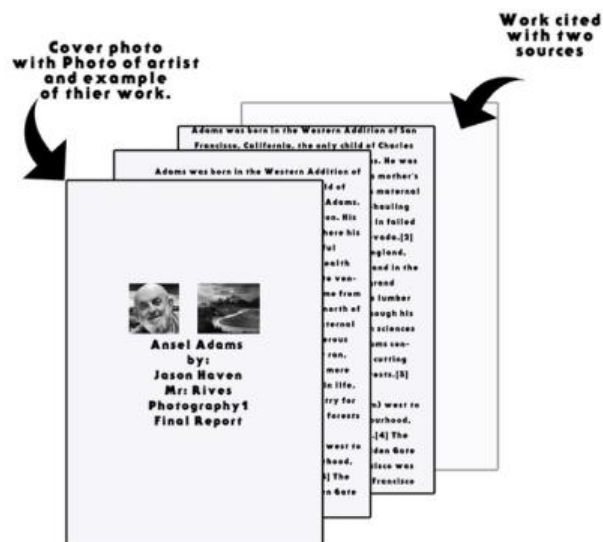
CERAMICS FINAL EXAM

Write a two-page report on one of the following ceramic artists. Must use Times New Romans, size 12 font, use at least two sources, and include a work cited page.

Topics to include - childhood, education, influences, and their art in general- what it looks like, talk about a particular piece of theirs and your opinion of their work. Include a photo of the artist and one piece of their artwork.

Rudy Autio
Peter Voulkos
Robert Arneson
Toshiko Takaezu
Stephen DeStaebler
Charles Binns
George Ohr

Due on or
before the day of
the exam



Ceramics

Safety Rules & Cleaning Procedures

Every student must work together to maintain our work area. Following the procedures outlined below will keep this program running smoothly.

1. Always leave the space better than when you came to it.
2. All spills should be sponged up and cleaned as soon as they occur. A wet floor is a hazard to others.
3. It is not a good idea to eat or handle food while working with clay. Clay can grow bacteria.
4. Tables are to be wiped off in a manner that catches all clay scraps. Clay on the floor is simply more mess to have to clean later. All clay scraps are to be placed in the slip bucket. Do not throw clay in sink or trash can. Clay clogs up the sink and can be reused if put back in slip bucket.
5. When sweeping try to minimize dust in the air by using slow, small sweeping movements with the broom. The room is scheduled to be mopped weekly.
6. Shelves are marked by class. Please make sure work is placed in appropriate area.
7. Do not leave tools, sponges and brushes in the sink area. Place them in the appropriate red bin located on the back counter.
8. Sink and counter should be wiped clean and free of clutter.
9. Potters wheels must be left clean after each use.
10. The floor around the potters wheel should be left clean and free of splatters.
11. Wheels are to be turned off after each use.
12. When glazing pieces make sure that you completely close containers so that they do not dry out.
13. Brushes used for glazing should be thoroughly washed out and placed in the brushes bin on the counter.
14. Do not deliberately paint glaze on the bottom of a piece. Make sure that bottoms of ceramic pieces are free from accidental glaze drips. Glaze on the bottom of a piece will stick to the inside of the kiln when it is fired. – Note: you may be charged for damages done to kiln shelves if your pot sticks to kiln from glaze being left on the bottom of a piece.
15. Students are responsible for cleaning their area as well as putting up the materials that they have used in class.

I have read these rules and safety guidelines; I understand them, and I agree to abide by them.

Print Name

Signature

Date

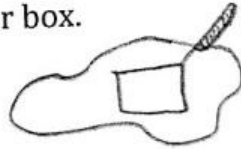
The Ten Golden Rules of Ceramics

- Clay must be thoroughly covered up with a plastic bag to keep it from drying out. This applies to works in progress and moist clay.
- Clay dust can be harmful if you are exposed to it for long periods of time, so keep your area clean, clay scraps off the floor and clean with water and a sponge.
- Clay can be no thicker than your thumb.
- In order for clay to stick together it **MUST** be scored and slipped together while the clay is moist or leather hard.
- Wedge clay to remove air bubbles, achieve uniform consistency, and to line up the particles of clay.
- Trapped air can cause clay to explode. So hollow out sculptural forms and put needle holes from the bottom so air can escape.
- Don't glaze the bottom of a piece.
- Always wash the piece before glazing.
- Always handle your project with two hands at all times. In other words BE CAREFUL it's your hard work.
- **NEVER HANDLE ANOTHER PERSONS WORK EVEN IF IT LOOKS COOL!**

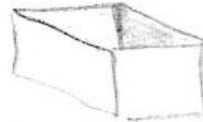
NEVER THROW Clay!

Slab Box Construction

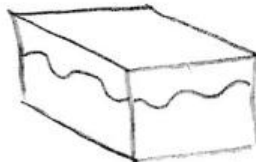
1. Put the clay on the board.
2. Use a rolling pin to roll out the clay. Be sure to make the clay at least $\frac{1}{4}$ " to $\frac{1}{3}$ " thick.
3. Use a template and a needle tool to cut out the sides and base and top. You will need 5 or 6 sides depending on the design of your box.



4. You will need 5 sides if you want a box with a lid.



5. You will need 6 sides if you want a box with the lid included as part of box.



6. After you cut out the bottom and sides, let the clay sit for about 30 minutes to harden and hold shape.

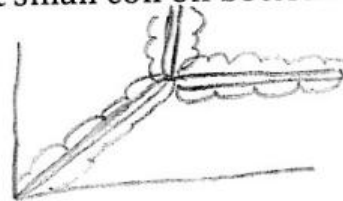
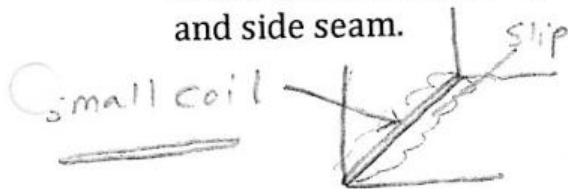
7. When your clay is hard, use a needle tool to score the edges. A criss-cross pattern works very well.



8. Apply slip to the areas that you wish to join.



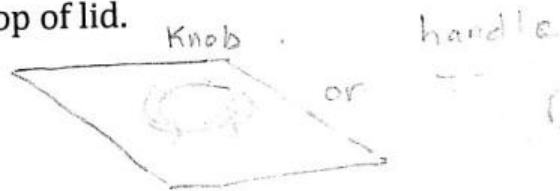
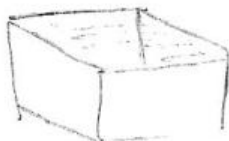
9. Join 2 pieces of clay together, put a small coil on seam, and smooth seam. Add 3rd piece and put small coil on bottom seam and side seam.



10. Every time you add clay, put a small coil on all new seams.



11. If you make a box with a lid, you will make it now. Make the lid larger than the box. Be sure to put a handle on top of lid. Put a raised area under top of lid.



12. If you make the lid included with box, you must put sixth side on box. You will then take a needle tool and cut into box to cut clay apart.

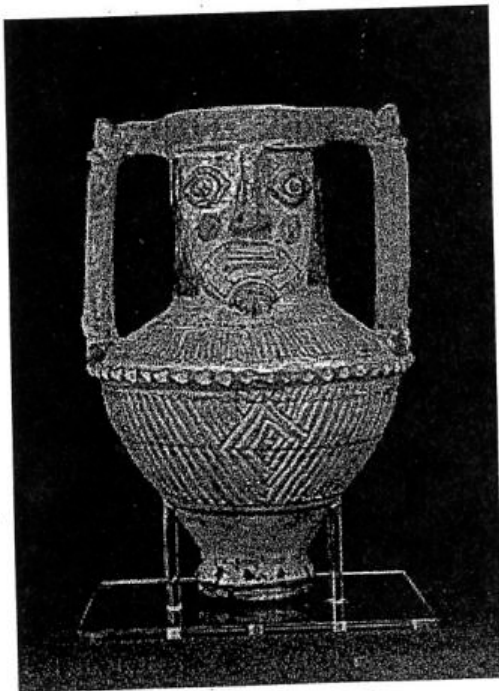


connected to
rest of
box

13. Google slab boxes and draw 8 sketches of boxes that you might like to make.

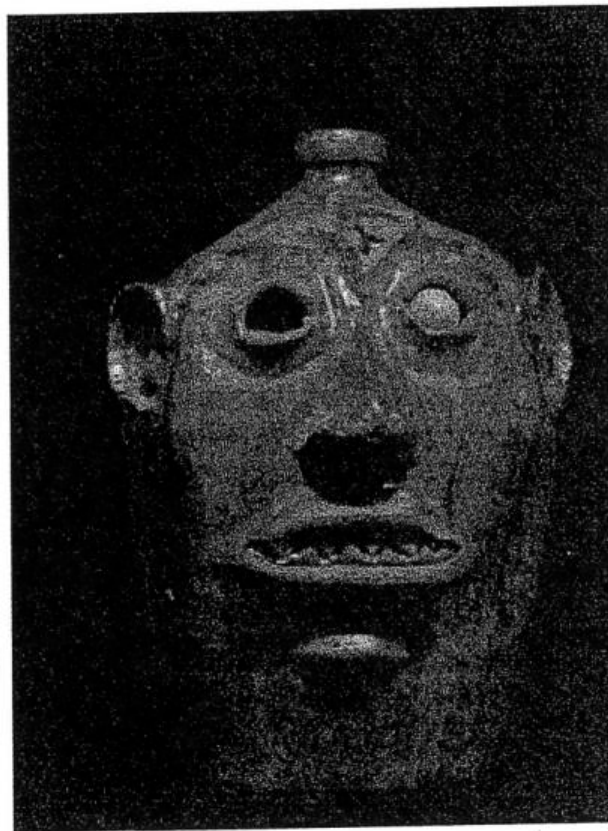
A History of American Face Jugs

The tradition of pottery with faces dates back to Egyptian and Mesopotamian times and appears in many other cultures throughout history. There are conflicting accounts, multiple stories, and varying theories about the 1st face jugs in the US. One account lists an unknown potter in Massachusetts as the creator of the 1st face jug in the US. Another account traces the 1st face jugs in the US to African slaves who worked on American plantations. One theory suggests that these early face jugs were used as grave markers by slaves. These jugs were supposed to ward off evil spirits. A South Carolina potter, who can trace his ancestors to slavery, states that "the idea was that the face jug would be ugly enough to scare the devil away from your grave so your soul could go to heaven."



Though there are many gaps in historical data regarding the making, use, and meaning of the face jug pottery, there is no doubt that the vessels were original, functional artistic expressions of the African slave culture of the time. This all adds to the mystery of possible deeper meaning of the face jugs in the slave culture. Few of the skilled potters who made face jugs have been identified by name and their inspiration for making face vessels is really unknown.

Researchers speculate that the vessels may have had religious or burial significance, or that they reflect the complex responses of people attempting to live and maintain their personal identities under cruel and often difficult conditions. Face jugs have been found along the routes of the Underground Railroad and on gravesites, both indicating how highly they were valued and how closely connected they were with the enslaved African American's own culture.





There has been a continuum in the interest of face jugs throughout the 20th century primarily centered on two prominent potters, Burlon Craig and Lanier Meaders. However it wasn't until the 1970's when there was an upscale interest in American Folk lore by university academics that the work of Craig and Meaders were exposed to a larger American audience. The popularity of these two potters surged and the face jug as an art form along with interest in its history experienced a renaissance.

Name:

Block:

Date:

The tradition of face jug pottery dates back to _____ and _____ times.

There are multiple accounts of the 1st face jugs in the US. One account lists an unknown potter from _____. Another account trace their origin back to _____ who worked on plantations.

One theory suggests that these early pots were used for _____ by slaves. One potter from South Carolina states that "the idea of the ugly face jug was to scare _____ so your _____.

There are gaps in the history of the jugs, but there is no doubt that the pots were original, functional artistic expressions of the _____ of the time.

Researchers speculate that the face jugs had _____ or _____ Significance.

Face jugs have been found on routes of the _____ and on grave sites.

The three states that produce face jugs are _____, _____ and _____.

When massed produced pottery was made, potters began to make _____ for tourist to continue their trade.

Face jugs became known as ugly jugs in the _____ and were used to store _____.

Interest in face jugs resurfaced in the 20th century because of two potters by the name of _____ and _____.



"A Face Only a Mother Could Love" Face Jug Pottery from the American South

Face Jugs are a unique pottery found in the American South. The origin of face jugs is not known for certain but has its roots in the African American slave community. Some of the earliest examples are credited to "Dave the Slave", who produced pottery from the 1820's to the 1860's in the Edgefield, SC area. Folk history holds that when someone in the slave community died, the jugs were modeled with devil faces and placed on the grave for a year. If the jug broke it was thought to be a sign that the soul of the deceased was wrestling with the devil. A second theory is that the scary faces were applied to jugs containing moonshine to keep children away from the contents.

Jim McDowell - calls himself "the Black Potter." He creates face jugs based on both his family traditions and his sacred ancestral tradition of using face jugs as grave markers. He's been a studio potter for more than 30 years and has been creating face jugs for nearly 20.

Born in Norfolk, Virginia, a great-great-great-nephew of a woman named Evangeline, an enslaved village potter in Jamaica; great-grandson of a tombstone maker from Gaffney, South Carolina; and son of a self-taught artist, James T. McDowell, Sr.

A Viet Nam-era veteran stationed in Ansbach, Germany, he was assigned to operate the craft shop on base. Jim wanted to use the pottery wheel and kiln he found there but had to learn it first. He heard about German potters in Nuremberg and went there on leave to find them. He didn't speak German and they didn't speak English but they let him observe their work, clean up the shop, and load the wood fired kiln, which he especially loved. He visited a few times and took what he learned back to Ansbach, practicing on the wheel until he was good enough to give lessons.

After eight years in the military, Jim went back to the coal mines in Kentucky and continued to make pots. With his first big paycheck he bought a wheel, an electric kiln, a thousand pounds of clay, and set up shop in his basement, eventually moving to a small studio. After 20 years in the mines ending up in Johnstown, PA, he left mining for good to produce pottery full time.



Although he owns gas and electric kilns Jim prefers to fire his pots and face jugs in a wood kiln. He is a master at wood firing and has supervised many firings at other potters' kilns. He is in the process of building his own wood kiln called a groundhog kiln and plans to eventually fire everything he makes this way. He'll be able to load the kiln with six or seven hundred pots at one time so he'll invite other potters to fire as well. Using this method, the firing takes an average of 16 to 18 hours, with the fire under constant scrutiny and tending.

Jim made his first "ugly" face jug in 1983 after seeing one created by a white potter. Remembering that his ancestor Evangeline made face jugs, Jim made his with black features. Later he learned about the literate enslaved potter, Dave from Edgeville, South Carolina, and to honor him he began inscribing messages on his face jugs like Dave did on his pots. Jim began to pour all his stored up emotions about slavery, his share-cropper ancestors, Civil Rights, discrimination he experienced in the mines and the military, religious beliefs, and more into the face jugs.

His hand printed words are the final touch on each face jug, another way of keeping a spiritual connection to each jug. Usually on the left side of the back of the jug, he writes an anti-slavery message, and on the right side a message for today. Regardless of the glazing and firing processes yet to come, Jim considers the pot complete once he has carved his words into the clay. However, when a face jug emerges from the kiln, Jim gives each a name related to its apparent personality, message, and characteristics.

As an older adult, Jim earned an associate degree in art from Mt. Aloysius College, but it did not include pottery studies. In this area he is almost completely self-taught. Jim is an Artist-in-Residence with Southern Alleghenies Museum of the Arts, and through its residency programs teaches pottery and art in public and private schools, and in hospitals through its Arts in Healing program.

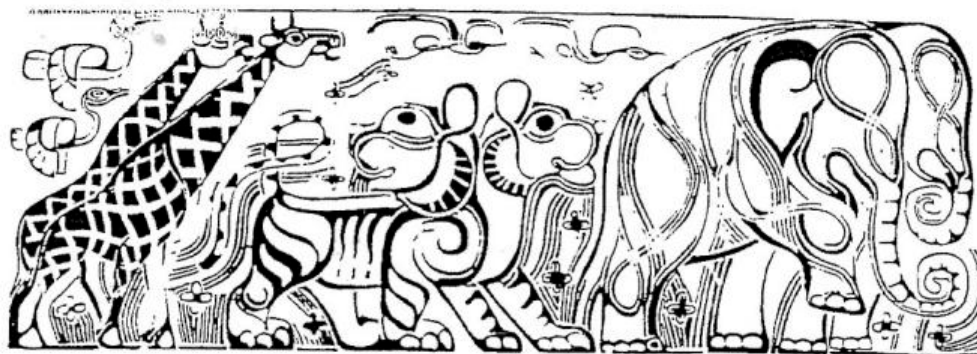
His motto quotes American artist, Daniel Rhodes, also a potter: "Earth, water, fire these are the ingredients of pots and human beings alike, and each formula contains an element of chance. Do not seek perfection in pots or people, for your search will be unrewarded, and you will miss knowing many good pots and good people." (right: Jim McDowell, *Son of the Morning*, clay, china; wood fired, 2008, 9 3/4 inches tall, 20 inches diameter. Loaned by The Black Potter.)

Walter Anderson

Walter Inglis Anderson (September 29, 1903 – November 30, 1965) was an American painter, writer, and naturalist. Known to his family as "Bob", he was born in New Orleans to George Walter Anderson, a grain broker, and Annette McConnell Anderson, member of a prominent New Orleans family, who had studied art at Newcomb College, where she had absorbed the ideals of the American Arts and Crafts movement.

Anderson was the second of three brothers, the eldest being Peter Anderson (1901–1984) and the youngest was James McConnell "Mac" Anderson (1907–1998). The two older brothers attended St. John's School in Manlius, New York until their schooling was interrupted by World War I and they enrolled in the prestigious Isidore Newman School (then called Isidore Newman Manual Training School) in New Orleans.

In 1918, the Andersons purchased a large wooded tract of coastal land in Ocean Springs, Mississippi. It was Annette's firm intention that all three of her sons become artists, and her husband's, that they learn to make a living from it. By 1924, a year after the family moved to Ocean Springs, Peter was experimenting with pottery, the Andersons opened a family business, Shearwater Pottery, which is still in operation in Ocean Springs.



Bad things do happen; how I respond to them defines my character and the quality of my life. I can choose to sit in perpetual sadness, immobilized by the gravity of my loss, or I can choose to rise from the pain and treasure the most precious gift I have - life itself.

Walter Anderson

In 1922, Anderson enrolled at the New York School of Fine and Applied Art (now Parsons School of Design), and after a year there, devoted to the study of commercial art and to exploration of New York's museums and galleries, won a scholarship to study at The Pennsylvania Academy of the Fine Arts.^[1] Here (1924–1928) he would study under iconoclastic modernists like Henry McCarter and Arthur Carles, winning a Packard Award for his animal drawing and a Cresson Scholarship which allowed him to spend a summer in France, where (he said) he was more impressed by the art of the caves and of the cathedrals than by the art he had seen in museums.

Ocean Springs

Returning to Ocean Springs after his years at the Academy, Anderson worked as a designer in the family business, Shearwater Pottery, founded by his older brother Peter.

In 1934, commissioned by a family friend, Ellsworth Woodward, Anderson painted an ambitious mural in the auditorium of the Ocean Springs Public School ("Ocean Springs Past and Present") as part of Public Works of Art Project. From 1938 to 1940 Walter Anderson was in and out of mental hospitals, he was diagnosed with severe depression with paranoid schizophrenia.

Walter Anderson's creativity in relation to his mental illness, ventures a possible posthumous diagnosis: "schizo-affective disorder, bipolar type"

In 1941, Anderson moved to Gautier, Mississippi, to live on his wife's father's estate (Oldfields) with his family. An extraordinarily productive period followed. Freed from his work at the Pottery, he had time to draw, paint and make block prints; to illustrate some of his favorite books;

Horn Island

The Oldfields period came to an end in 1945, when he left his family and moved back to a cottage at Shearwater. From then until his death in 1965 he lived a reclusive life, working as a decorator at the Pottery and making frequent excursions, in a rowboat sometimes rigged with a sail, from Ocean Springs to Horn Island, Mississippi where he lived in primitive conditions and portrayed the life around him - birds, sea creatures, animals, trees, landscapes - in radiant watercolors and in a series of logbooks. He also ventured abroad to Costa Rica and China, and made numerous bicycle trips, on some of which he traveled for thousands of miles. "The wheels are turning again", he once wrote. "A bicycle seems to leave no room for other evils, or goods for that matter. It is an inclusive and exclusive wheel."

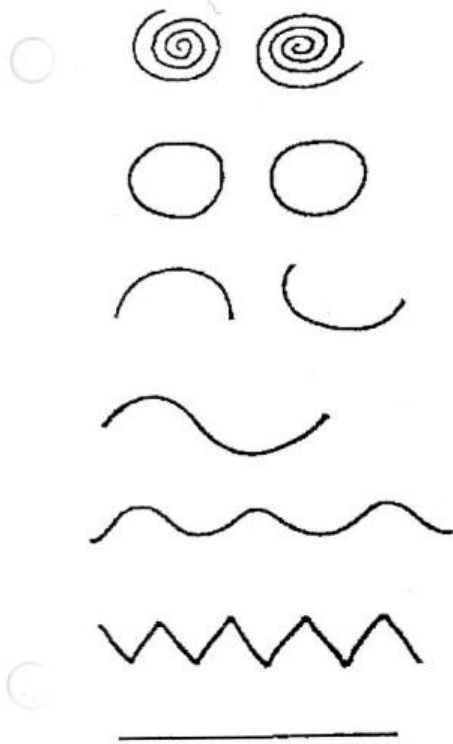
One of his greatest works from this period is a series of murals in the Ocean Springs Community House. Along one wall, he painted the landing in Ocean Springs of the 17th-century French explorer Pierre Le Moyne d'Iberville. Along the opposite wall he painted what he called the "Seven Climates," in the sense of "a belt of the earth's surface contained between two given parallels of latitude." The Gulf Coast—Ocean Springs in particular - is seen as a microcosm of these climates, each of which Anderson associates with a corresponding celestial body and with a season of the year: Jupiter, Saturn, Mars, the Sun, Venus, Mercury and the Moon, beginning with Mercury and ending with Uranus. Anderson must also have been aware of the doctrine that the seven planetary spheres, with their different tones, produce a celestial music. Another, smaller mural, painted around the same time but discovered only after his death on the wooden walls of a padlocked room in his cottage at Shearwater, is inspired by Psalm 104. It is a radiant hymn to light and to the beauty of one day on the Coast, beginning on the east wall with sunrise and continuing around the room through noon, sunset and night. Both murals may be seen at the 'Walter Anderson Museum of Art.

“Our lives improve only when we take chances - and the first and most difficult risk we can take is to be honest with ourselves.”

Walter Anderson's Work



The Seven Motifs



Walter Anderson used the Seven Motifs to draw his designs of animals and nature. Find 5 of the 7 in the picture below.



I am responsible. Although I may not be able to prevent the worst from happening, I am responsible for my attitude toward the inevitable misfortunes that darken life.

Walter Anderson

Creative Process

Have you ever wondered what's going on in the head of an artist as he she creates a work of art? Have you ever thought how do they do that, or said, "I wish I was creative like that".

In 1979 Albert Rothenberg Completed his book *The Emerging Goddess*. The book explored the common elements in the process by which creative people make works of art. After watching, interviewing and analyzing many different artists at work Rothenberg finds the following to be the common steps universal to all who are making impacting and original works of art.

1. Preparation- Gathering data, familiarizing oneself with mediums and how they work, looking at other's pieces, formal and non-formal education in design and elements.



2. Incubation – This is the process where an individual wanting to create begins to internalize an idea. He/she wrestles with the problems and aesthetics in their eye. They pull from experiences, unique perspectives, and decide how that distinct voice will come out in their work.



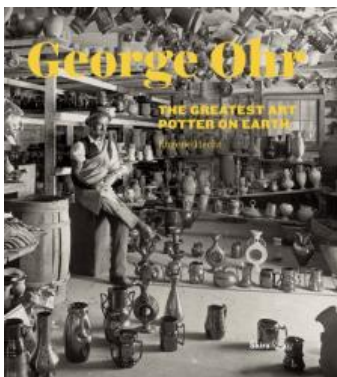
idea.

minds

3. Illumination- Idea sees light for the first time in the form of a rough draft, bozzetti, sketch or simple drawing. This is the first time the idea is in the physical realm where creator can use his or her senses to further critique and modify the idea.



4. Verification- After going through an internal and external process the artist makes a work of art that expresses his or her unique perspective.



GLOSSARY OF CERAMIC TERMS

Aesthetics -A philosophy, belief or idea of what is beautiful or pleasing. Your personal aesthetic is your taste - in art, in music, in food, in dress, etc. Aesthetics vary from culture to culture, generation to generation, and person to person, among other things.

Absorption- The capacity of a material to soak up liquid.

Adsorption- The collecting of liquid on a surface by condensation.

Agateware - Pottery made with colored clays swirled together in a marble-like pattern, or covered with colored slips that are swirled together to achieve a similar effect.

Armature- A framework around which clay can be modeled.

Ash – A glaze made with the byproducts of burned wood or vegetation

Atmosphere – The mixture of gases in the kiln environment.

Ball clay - A very fine, plastic secondary clay with a high shrinkage rate, not suited for use by itself. Added to other clays to make them more plastic and workable. In glazes it works as a suspending agent.

Banding- A method of applying a glaze or slip decoration by holding a brush tip against a rotating pot.

Banding wheel - A simple turntable rotated by hand, onto which work may be set and spun around in order to apply decorative bands or work the piece evenly. On many banding wheels, including very heavy cast-iron ones, the head is not attached to the base, and if the banding wheel is picked up by the head, the base will fall off and hit the floor - or your toes - with a embarrassing crash. Don't say I didn't tell you

bas-relief- Raised or indented patterns which remain close to the surface plane.

Bat - A disk or slab of plaster or other material used for drying clay or supporting clay forms while being worked.

Bench Wheel - A portable turntable for rotating pottery being formed, decorated or otherwise worked.

Bisque - Clay which has been fired once, unglazed.

Bisque Fire - First firing of clay to drive out chemically combined water and carbonaceous materials prior to glazing.

Blow Hole - An opening at or near the top of a kiln, which facilitates steam escape or cooling.

Blowout - The explosion of clay in the kiln caused by the sudden escape of steam resulting from rapid heating or the presence of impurities.

Bone China - A creamy, transparent, English soft porcelain fluxed with ash from animal bone.

Bone Dry - The condition of unfired clay that has no absorbed moisture other than natural humidity.

Burnish - Using a smooth object to polish the surface of leather-hard clay.

Calipers – A hinged tool used for measuring diameters on the inside or outside of a three dimensional form.

Carbonates – A compound containing carbon and other elements, used in making and coloring glazes or clay bodies.

Casting - A process of forming a clay object by pouring clay slip into a hollow plaster mold.

Celadon – A category of green, gray or blue-gray glazes for stoneware and porcelain; developed in China and Korea.

Centering – The process of applying pressure to a lump of clay as it spins on a potters wheel which positions it for even rotation on the wheel head

Centrifugal force – The tendency of matter to flee from the center when spun. The faster the rotation the stronger this force becomes.

China - White ware clay bodies glazed at a lower temperature than that at which they are bisque.

Clay Body - A compound of decomposed and altered feldspathic rock consisting of various hydrated silicates of aluminum along with non-plastics, such as quartz, and organic material.

Cleanup karma - Not thoroughly cleaning up after yourself can lead to bad cleanup karma, where you will be cursed to clean up 1000x more later in life for each little thing you neglect now.

Coil - Rope-like roll of clay used in hand building.

Coiling:

A method of hand building a form using long rolled out, or extruded, snake-like lengths of clay. Each coil of clay is integrated with the previous one to build the work up. The coils may be completely obliterated in the construction process or retained for their decorative qualities.

Collaring or Necking - A method of narrowing the neck of a pot by squeezing in with the fingers as the pot revolves on the potter's wheel.

Combing or Feathering- Decorating by gently drawing a coarse comb or feather tip through contrasting rows of wet clay slip or glaze.

Cone or Pyrometric Cone - A small triangular pyramid made of ceramic materials that are compounded to bend and melt at specific temperatures. The cone serves as a time-temperature indicator of heat work in a kiln.

Cottle or Coddle - Any smooth flexible material, such as vinyl or galvanized sheet metal, which can be used to contain plaster when making a mold.

Crackle Glaze - A glaze developing minute cracks which are considered decorative and are often accentuated by rubbed-in coloring material.

Crawling - Separating of those glaze coats during firing, exposing areas of unglazed clay.

Crazing - The undesirable formation of a network of cracks in the glaze caused by uneven clay or glaze contraction.

Decant - To remove the water that has collected at the top when a material settles in a liquid.

Downdraft kiln - A kiln that vents its exhaust through a flue set at floor level (to the interior of the kiln) that feeds into a chimney. The chimney is required to help create the convection currents necessary to draw out the waste gases. Since heat and gases from the burners enter in from the bottom of the kiln, rise through it and then must be drawn down to exit, the heat flow through the kiln is more even and efficient than that in an updraft kiln. Downdraft kilns are also preferable for reduction firing.

Dipping - Coating pottery by immersing it in slip or glaze.

Dry Foot - The bottom of a pot, which has been cleaned of all glaze before firing.

Dunting - Cracking of fired ware in a kiln which has cooled too rapidly.

Earthenware- Clay that matures at a low temperature but remains porous.

Elements - High resistance wire coils or bars used as the heat source in an electric kiln.

Emboss - To decorate a surface with raised ornamentation.

Fettle or Fettling - To finish or smooth the surface of leather-hard clay. Also to trim the excess clay from cast ware.

Filler - A material with little or no plasticity used to promote drying and reduce shrinkage of clay bodies or engobes.

Firebrick - A refractory insulation brick.

Fireclay - A clay used in clay bodies for its heat-resistant quality. Also used in the manufacture of kilns and other refractory equipment.

Firing - The heating of clay or glaze to a specific temperature.

Flaking - The peeling off of a glaze or slip from a clay structure.

Flux - A substance which promotes the melting of silica in a glaze.

Foot - The base of a ceramic piece.

Fusion Point - The temperature at which a clay or glaze material melts.

Glaze - A glass-like coating fusion bonded to a ceramic surface by heat.

Glaze Fire - A cycle during which glaze materials are heated sufficiently to melt and form a glassy surface coating when cooled.

Greenware - Unfired clay objects.

Grog - Fired clay that has been crushed into granules which may be added to a clay body to increase strength, control drying and reduce shrinkage.

High Relief - A strongly raised or deeply carved pattern.

Impressing - Method of decorating by stamping into a clay surface.

Incising - Engraving a decoration into unfired clay.

Kaolin - A white firing, highly refractory primary clay. Kaolin, meaning “high hill”, probably refers to Kaoling, the mountain in China where this white clay was first discovered.

Kiln - A furnace for firing ceramic products.

Kiln Furniture - Refractory shelves, posts and other equipment placed in a kiln to hold ware during firing.

Kiln Wash - A refractory mixture, usually of kaolin and flint, which is applied to the kiln shelves and floor to prevent fired glaze from adhering to them.

Kneading - Working clay on a surface with the palms of the hands in order to remove air from it and obtain a uniform consistency.

Leather Hard - The condition of raw clay ware when most of the moisture has evaporated leaving it still soft enough to be carved or joined to other pieces.

Majolica- Earthenware covered with a tin glaze and painted with oxides. Also known as maiolica, faience, and delftware.

Matte or Matt- Dull surface, not shiny.

Maturing Temperature- The temperature at which a clay body can be fired to resulting in achieving desired hardness.

Melting point – when a glaze fuses and turns into fluid, glasslike substance during a firing.

Mid fire- Clay or glaze that is fired to cone 4-7 in a kiln.

Mold - A plaster or bisqued clay shape from which a clay form can be reproduced.

Opacifier - A material that makes the glaze non-transparent or opaque, such as titanium dioxide, tin oxide, or zirconium silicate.

Once Fire and **Single Fire** - A slow firing cycle which combines both bisque and glaze firings.

Oribe - A style of Japanese pottery, named after Furuda Oribe; refers to modern-day, transparent, copper-green glazes.

Overglaze - Glaze decoration applied on the surface of a fired glaze, which is then refired.

Oxidation - A firing where there is either no combustion occurring (electric kiln) or where there is sufficient oxygen in the kiln to allow the fuel to burn cleanly. The atmosphere of the kiln (oxidation, or reduction) dramatically affects the resulting clay and glaze colors, for example; copper in oxidation is green (as is copper oxide) in reduction it becomes red (more like copper metal).

Peeling - Separation of the fired glaze or slip from a clay surface because the clay has contracted more than the glaze.

Pinholing - Tiny holes which appear in a fired glaze, often caused by poor clay preparation, improper glaze application or incorrect firing.

Pins - Refractory supports used to place ware in racks for firing.

Plaster of Paris - Calcined hydrated calcium sulfate, or gypsum, used in ceramics to make molds and bats.

Plasticity - The quality of clay that allows it to be easily manipulated and still maintain its shape.

Porcelain - A strong, vitreous, translucent, white clay body that matures at cone 12 or above.

Porosity - The capacity of a clay body to absorb moisture.

Pressing - The forming of clay objects by squeezing soft clay between two halves of a mold.

Pugmill - A mean, unclean, man-eating machine for mixing, compressing and extruding clay, useful for recycling scrap clay and destroying anything else mistakenly fed into it, which you will then find chips of in your clay exactly when and where you don't want them. Make sure not to mix up and recycle your tools with your clay. Or your hands, or arms, etc. Modern pug mills have small openings to feed the clay into, in an attempt to prevent careless and tragic accidents. I have an old-school monster with a big, beautiful, wide-open toothy maw that will swallow anything, including bucketful's of clay; it's like having my very own pet great white shark. I love it. But I don't let the students feed it. At all.

Pyrometer - A bi-metallic strip which translates heat energy into electrical energy used to indicate the temperature in a kiln.

Refractory - The quality of resistance to high temperatures. Also, high alumina silica material used in the manufacture of kiln furniture and interiors.

Rib - A hand held tool made of hard material used to shape a pot when throwing.

Sagging - The slumping of a form while the plastic clay is still soft.

Sedimentary Clay - Clay that has been transported from its original site by water, air or ice and deposited in layers elsewhere.

Sgraffito - A decorative process by which a line is scratched through a layer of slip or glaze before firing to expose the clay body beneath. From the Italian, meaning “scratched out”.

Short - Clay that is nonplastic and breaks and crumbles easily.

Shrinkage - Contraction of the clay or glaze in either drying or firing.

Single Fire - See “once fire”.

Slake - To pour dry material into liquid and allow it to absorb the liquid to its fullest capacity.

Slip - A suspension of clay or glaze materials in water.

Slip Trailing - A decorating method which uses a syringe to apply slip to a clay surface.

Slurry - A creamy mixture of clay and water.

Spurs - Triangular refractory supports which keep glazed ware from touching kiln shelves during firing.

Spyhole - The opening in a kiln wall or door through which cones may be viewed during firing. Can also act as a steam vent during the early stages of firing.

Stilt - A ceramic tripod used to support glazed ware in a kiln during firing.

Stoneware - A grey to buff, nontranslucent clay body which matures between 6 and 10 cones.

Terra Cotta - A brownish-orange earthenware clay body, commonly used for ceramic sculpture or architectural ornament. From the Italian, meaning “baked earth”.

Throw or Throwing - Using the potter's wheel to make forms by hand from plastic clay.

Trimming - A method of paring away excess clay, usually from the bottom of pot to form a foot, while the clay is leather hard.

Undercut - The inward slant of a mold which can prevent clay from being released.

Underglaze - A colored decoration applied on raw or bisque ware before the glaze is applied.

Vitreous - The hard, glassy and nonabsorbent quality of a clay body or glaze.

Vitrify or Vitrification - To fire to the temperature at which a clay or glaze attains its mature, hard, glass-like quality.

Wax resist – A decorative technique where liquid wax is applied to a fired or unfired clay body. The waxed portion resists any glaze that is applied to the clay body.

Wedge or **Wedging** - Mixing and de-airing clay by cutting it diagonally and slamming the pieces together.

Wheel Head - The turning disk or a potter's wheel on which the clay is thrown or worked.

BELL RINGERS

35,000–7000 BC

Paleolithic Age
bell ringer 1

Fire Age artists modeled good-looking animal figurines, incising lines and leaving their fingertip and fingernail impressions in the clay. Figurine creation was widespread with examples discovered at Dolni Vestonice, The Czech Republic (22,000 BC), Japan (15,000 BC), and Siberia (12,000 BC). Earliest ceramics may have been used in social activities or religious rituals that involved the making and firing of these images. The firing event may have included the figurines and wet pieces of clay, which would have exploded in the fire making for a dramatic yet playful performance.

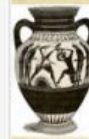


1

6000 BC **bell ringer 2**
Middle East

Earliest signs of settled life developed on the plateau of Turkey, Iran, and Iraq, and expanded to the Tigris Euphrates river area in Mesopotamia when people learned to practice irrigation around 5000 BC. Potters produced vessels by coiling long rolls of clay on top of a flat base or by pressing a slab of clay over a mold, such as a round stone or gourd. A **paddle and anvil** were used in shaping pots. **Slip coatings** (fine liquid clay) were also applied to vessels and burnished to attain a smooth surface. Two pottery-making traditions developed: plain, undecorated, dark burnished ware and ware decorated with incised or impressed designs in simple zigzag patterns and angular lines. Decorations were painted red and black with clay oxides.

2



4500 BC **bell ringer 3**
Mesopotamia

In Mesopotamia, potters learned how to control the atmosphere in the **kiln** (furnace for firing clay) in order to obtain **oxidation** (increased oxygen resulting in red veneer) or **reduction** (decreased oxygen resulting in black veneer). Pottery-making became more sophisticated as clays were refined and prepared by decanting **suspension** (the process of adding water to clay in order to allow the larger particles and organic materials to separate out while standing and then gently pouring off the liquid without stirring up the sediment).

3

4000 BC **bell ringer 4**
The First Cities, Middle East

Builders in the Middle East constructed cities using clay bricks. Officials wrote on clay tablets to chronicle city records as well as agricultural and trade information. Potters developed the **pottery wheel** and crafted earthenware molds, which increased production and transformed the making of pottery. These events led to craft specialization.

4

3000 BC **bell ringer 5**
First Pottery Made in South America

Prehistoric people living in farming villages located in the Andes Mountains (Ecuador) and the Amazon Basin (Brazil) created the earliest pottery known in the Western Hemisphere. This original red-brown pottery was decorated with simple lines and painted patterns.

5

2700 BC **bell ringer 6**
The First Glaze, Egypt

Egyptian potters discovered an alkaline glaze-forming clay body, **Egyptian Paste** or **Egyptian Faience**. This clay was a composite of crushed quartz mixed with soda and calcium salts, which produced a blue-colored surface glaze when fired. Egyptian Paste was used for ceremonial vessels, jewelry, and small sculptures.

6

2655 BC **bell ringer 7**
Banshan Culture, China

Neolithic craftsmen fashioned painted pottery jars by using the clay coil and paddling technique. After firing, burnished surfaces were gracefully painted with red and black pigments in spiral patterns and designs. Early Chinese pottery was fired in kilns that were dug into the ground.

7

2500–1500 BC
Jomon Period, Japan

bell ringer 8

Jomon (cord impressions) ware was made throughout Japan during the Japanese Neolithic Age. It was characterized by elaborate coil-built vessels fashioned from unrefined clay. The clay often contained organic matter, pebbles, and shell fragments that added textural excitement to the ware's coil construction. Elaborate flaring tops, fanciful rims, and cross-hatching contributed to the visual drama of this distinctive style.



8

2500–1100 BC
Minoan Culture, Crete

bell ringer 9

On the island of Crete, Minoans used terra-cotta pipes in drainage systems for their baths. They built huge vessels, more than five feet tall, to store grain, olive oil, and food. Their pots were distinctively decorated with naturalistic designs of marine life and plants. Masterful sailors, the Minoans traded pottery vessels filled with oil and wine for tin from Asia Minor, copper from Cyprus, and luxury goods from Egypt.

9

1600–1100 BC
Shang Dynasty, China

bell ringer 10



The Bronze Age potters of the Shang dynasty developed highly sophisticated casting techniques. They used fired clay molds to cast elaborate bronze vessels. Kilns continued to be built in the ground, and the earth's natural insulation increased fuel efficiency. The development of effective chimneys also improved kiln technology. Around 1400 BC, the first **stoneware** (high-fired pottery) was made using **kaolin**, a white primary clay, found in large deposits in China. During the **protoporcelain** (before porcelain) period, potters learned how to use wood ash in combination with minerals, such as silica and alumina, to achieve a successful glaze.

10

1200–500 BC
Olmec Culture, Middle America

bell ringer 11

The Olmec culture, centered in the eastern Gulf coastal region of Mexico, is thought to be the earliest civilization in pre-Columbian Central America. The jaguar, believed to be a god, was the center of the Olmec religion. Many of their stone sculptures and molded clay figurines depicted **were-jaguars**, half-human, half-jaguar beings. **Olmec** baby figures along with werejaguars were believed to be earthly forms of gods. These earthenware baby figures, which were produced in great numbers, are thought to represent infant offerings to the rain god who symbolized rebirth and regeneration, or perhaps, they represent the rain spirits themselves.

11

1100–400 BC
Chavin Culture, South America

bell ringer 12

The Chavin people lived in the central Andean region of South America. They introduced the whistle jar (which whistled when the jar's contents were poured out) and the stirrup vessel. Both were thought to have been used in funeral ceremonies and buried with the dead. Chavin style was the precursor for most Peruvian cultures.

12

900–500 BC Bell ringer 13 Earliest Lead Glazing, Middle East

In the Azerbaijan region, lead was used in some early glaze formulas. An extended color range of glazes emerged, including black, red, green, purple, yellow, and white. Lead glazes were formulated with silica (sand), which was mixed with sulfide or oxide of lead. The use of lead intensified glaze colors and also made ware impervious to liquids. The practice of lead glazing, however, did not become extensive until the Roman era.

13

700 BC Bell ringer 14 Black-Figure Technique, Greece



This elegant style of two-color thematic decoration employed the use of a black slip to paint heroic and mythical figures on a red clay background. Artists detailed features and fine lines by scraping through the slip with sharp tools to expose the lighter clay beneath. By controlling the amount of oxygen in the kiln, artists were able to achieve a glossy black and red decoration.

14

600 BC Bell ringer 15 Red-Figure Technique, Greece

This style of decoration used reserves, or unpainted figures. The reserves retained the color of the red clay while the black firing slip was used to paint fine details on the figure and around the reserves. The striking red figures stood out from the black background when a firing sequence of reduction followed by oxidization was used.

15

600 BC bell ringer 16 Tin-Lead Glazes, Middle East

Persian, Assyrian, and Babylonian walls and buildings were decorated with glazed tile reliefs. Potters added tin oxide to lead glazes to achieve a white background on red clay for painting colored decorations. Later, they made intricate, multicolored tiles by using raised lines of slip, which kept glaze colors from running into each other during the firing.

16

300 BC–AD 1400 bell ringer 17 Life-sized Terra-Cotta Sculpture, Africa

In western Africa, the Nok (300 bc), followed by the Ife (800 bc–ad 1400), developed great technical skills in clay as they fashioned and fired life-sized terra-cotta human figures. Nok sculptures are distinguished by purity of form and decorative restraint. Ife figures embody idealized naturalism. Ife craftsmen were skilled in bronze casting by the eleventh century and expertly produced ceramic crucibles and molds.

17

221–202 BC bell ringer 18 Life-sized Terra-Cotta Sculpture, Qin Dynasty, China

It was the Chinese custom for the dead to be buried with food, pottery, and other items thought to be needed in the afterlife. Excavations near Emperor Qin's imperial tomb unearthed an army of 7000 life-sized soldiers with their weapons and horses. These realistic, painted terra-cotta figures (each face was an individual portrait) demonstrate astonishing skill in both ceramic sculpture and firing techniques.



18

206 BC–AD 221 bell ringer 19 Han Dynasty, China

The Han dynasty was the beginning of a united Chinese Empire. During this period, the silk trade reached from the East Roman Empire to India and Persia. Chinese potters probably acquired the art of lead glazing from these contacts. Clay vessel shapes were based on bronze originals and decorated in similar fashion with cut relief and applied handles and bands. An extensive amount of *Mingqi* (tomb pottery) was produced consisting of pottery models of family and servants, buildings, grain towers, farm animals, and vessels for food and drink to accompany the deceased to the spirit world.



19

100–700 bell ringer 20 The Mochica Culture, South America

The Moche civilization flourished on the north coast of Peru. Although their culture had no writing system, Moche potters recorded historical and mythological events, and narrated their life and customs on richly decorated ceremonial pots. Expert artists, the Moche modeled figures and fashioned portrait vessels, stirrup jars, bird-shaped whistle jars, and musical instruments.

20

950–1325 Mayan Post-Classic Period, Middle America

The Mayan people flourished on the Yucatan Peninsula, Guatemala, and El Salvador. They recorded their history in hieroglyphs on stone slabs. Early Mayan pottery was strongly influenced by that of Teotihuacan (Mexico). Later, Mayan potters molded terra-cotta figures depicting gods, nobility, acrobats, warriors, ball players, and ordinary men and women performing domestic chores.



21

200 BC–AD 476 The Roman Empire, Europe Bell ringer 21

The Romans brought a number of technological innovations to Northern Europe. They introduced the potter's wheel, produced relief-decorated ware from molds, and developed large, parallel flue kilns. Workshops were turned into factories as great quantities of pottery were mass-produced for their growing cities and large armies. They manufactured fired-clay building materials, such as bricks, roof tiles, ceramic floor tiles, and decorative ornaments. *Arretine* ware, a red glass ware, was the most common Roman pottery. It was made in stamped molds, covered with a fine red slip called *terra-sigillata* and fired in an oxidizing atmosphere to achieve a glossy, rich red finish.

22

200 bell ringer 22 Feldspathic Glazes, Yueh Ware, China

During this period, potters discovered a leadless glaze compound made of feldspar, sand, potash, quartz, and other ingredients that required high temperatures to fuse. The first feldspar-glazed stoneware, Yueh ware (a precursor of Celadon ware) was distinguished by colors ranging from pale gray-green to bluish-green on a white porcelainous clay body. Yueh vessels imitated the bronze styles of the Han dynasty.

23

200–600 bell ringer 23 Haniwa Figures, Japan

Japanese potters made unglazed earthenware Haniwa figures. These figures, mounted on clay cylinders, were sculpted, impressionistic representations of men, women, animals, or buildings. It is thought that the Haniwa were placed around burial mounds to protect the deceased and to keep the mounds from eroding.

24

300-980

Classic Period, Teotihuacán, Mexico

bell ringer 24

Clay artists in Central Mexico produced a variety of handbuilt and molded pottery. They used the **fresco**, an unfired technique, to decorate magnificent tripod ritual vessels. These decorations were symbolic motifs painted in brilliant colors on thin layers of stucco or plaster that covered the fired vessel.

618-906

Tang Dynasty, China

bell ringer 25


During this period, one of the richest eras of Chinese art and learning, ceramic art reached an outstanding level of achievement. Tang potters produced and exported dense white porcelain wares. Earthenware figurines, decorated with lead glazes colored yellow (iron), blue (cobalt), and green (copper), were produced in tremendous quantities for tomb furnishings.

632-1150

Early Islamic Wares, Middle East

bell ringer 26

Islamic potters were never able to produce porcelain because the clays in this region were deficient in high-firing minerals. In their attempts to imitate Chinese Tang imports, they made spectacular breakthroughs in glaze technology. They used a glaze made of ash of tin over earthenware clay to get a white opaque glaze upon which they painted designs with various coloring oxides. **Islami**, the most popular color, gave a rich blue color to the designs. (This blue and white combination would later be imitated by the Chinese.) They discovered and perfected **luster painting**, a glazing technique in which a metallic pigment, such as silver, copper, gold, or platinum, is applied over an already fired glaze. A metallic film appears on the surface of the piece when it is fired again under lower temperatures in a reduction atmosphere. Islamic potters mastered the secret of underglaze painting by coloring a clay slip, similar in composition to the slip body, with metallic oxides. This made the painting strong enough not to disappear under a liquid glaze.



800-1400

Southwest Indian, North America

bell ringer 27

Three main cultures inhabited the Southwest: each produced differently styled decorated pottery. The Hohokam, who occupied southern Arizona, developed a culture based on irrigation farming. Their red-on-buff pottery was characterized by an outspread rimming line **hohokam** motif's result to form a pronounced shoulder followed by an always inward curve to the top. The Anasazi of northern Arizona and New Mexico, southern Colorado and Utah were superior builders of pueblos (clay-brick wall houses). The Anasazi produced heavily decorated black-on-white pottery. The Hopi, who inhabited southwestern New Mexico, lived in the Southwest and Mexico. Their pottery is characterized by great simplicity and limited variation of forms.

950-1325

Mayan Post-Classic Period, Middle America

bell ringer 28

The Mayan people flourished on the Yucatan Peninsula, Guatemala, and El Salvador. They reached their history in hieroglyphs on stone slabs. Early Mayan pottery was strongly influenced by that of Teotihuacán, Mexico. Later, Mayan potters molded terra-cotta figures depicting gods, military warriors, warriors, ball players, and ordinary men and women performing domestic chores.

918-1382

The Koryo Dynasty, Korea

bell ringer 29

Decorated Celadon ware best exemplifies the work of this time, the Golden Age of Korean ceramics. Slip-filled, incised patterns under a celadon glaze, **Punch'ong** ware (or **Mishima**, as called by the Japanese), was an important, new, distinctively Korean, decorative technique. Naturalistic motifs of ducks, grasses, willows, and flowers were used to suggest spiritual calm and beauty.

1000

Early Stoneware, Germany

bell ringer 30


German potters in the Rhine Valley had an abundance of good clay and a bountiful supply of wood for their kilns. The clay contained a high sand content, which allowed it to tolerate high temperatures without collapsing. This combination enabled potters to produce stoneware.

960-1279

The Song Dynasty, China

bell ringer 31

Song potters were masters of harmonious, well-proportioned form, and they beautifully refined vessel shapes. The inclusion for **porcelain** (a high-fired, white translucent ware that makes a musical sound when struck) began with the Song emperors, who were patrons of the arts. Porcelain, however, was only a small part of Song production. Most pottery made during this time was stoneware. Song pottery is divided into two categories: northern and southern.



960-1127

Northern Song, China

bell ringer 32

Several different styles were prominent during this period. Among them were **Ting** ware, a glazed porcelainous body that featured a smooth, ivory white glaze over delicately impressed or engraved motifs; and **Tru-chau** ware, a light gray-colored stoneware covered with white slip and vigorously painted with dark brown or black decoration.

1128-1279

Southern Song, China

bell ringer 33

Glaze development expanded during the Southern Song period. Some of the more popular glazes were **Celadon**, a translucent green or green-blue color originally made to imitate jade; **Tenmoku**, a thick, dark brown glaze breaking to lighter brown; and **Oil Spot**, which appeared to have oil spots breaking on the surface. **Crackle**, a glaze having a network of deliberate surface cracks, was also developed during this time. Two types of kilns were used: a single-chambered, downward, low-tile type and the dragon kiln, a tunnel built into a hillside. Later, the dragon kiln was divided into many sections or chambers, which allowed large quantities of pottery to be fired at the same time but at different temperatures in the different sections.

1150-1350

Medieval Islamic Period, Middle East

bell ringer 34

The Seljuk Turks' conquest of the Persians marked the beginning of the zenith of Islamic ceramic art. This period was distinguished by the development of a **soft paste** clay (a composite body of powdered quartz, clay and alkaline feld) and **enamel glaze** painting. Potters tried to duplicate the white porcelain of the Song dynasty by glazing or covering their wares with this pale yellow glaze. The glaze fired in the delicate design when it was fired. This white ware, later called **Gambroon** were after the port of Southeast from which it was exported. had the appearance of porcelain and resembled the Chinese Ting ware. Potters also perfected the highly complex technique of **enamel painting** in which a low temperature glaze was applied over an opaque white glaze. This beautifully decorated pottery is known as **Mina's** ware. During this period, tiles in two sizes and intricate designs were fabricated to decorate buildings. The tiles of Kashan and Ray in Persia were the major center of pottery production.

1200-1521

The Aztecs, Central America

bell ringer 35

The Aztecs became the dominant ruling culture during this period. Centered at Tenochtitlan, the ancient name of Mexico City, the capital of Mexico, Aztec society was very tightly controlled by the governing ecclesiastical class. Religious rituals, which included combat and human sacrifice, sustained Aztec fixations on death and deities, and were represented by many of the images that were painted or modeled on their pottery.





