

Journal



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ARTS 1400: Ceramics
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01 The formal conceptual
understanding of art: and
continued notes

02 Introduction to clay

03 Test tiles project

04 Building a connection
to clay

05 Pear project

06 Coil project

07 Slab project: boxes

08 Wheel throwing

09

Glaze

10

Mugs and cups

11

Sources

12

Thank you



Shahpour Arian ceramic works at Frist Art Museum

The formal conceptual understanding of art

The formal conceptual understanding of Art

What is Art?

-An outlet of communication

- =work of art: visual expression of an idea or experience
- medium: particular material, along with technique

What is creativity?

- Ability to create something new
- everybody is creative
- Everything has been done how can new meaning be created?

ART = FORM + CONTENT

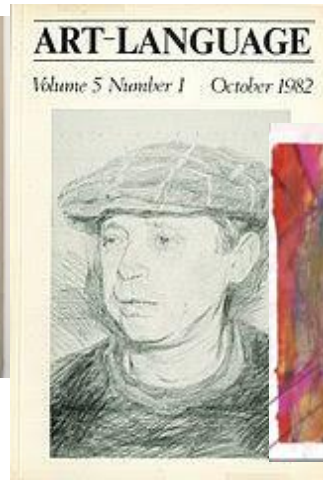


1.) subject matter: something that you can name when you see it. objects/subjects sets the scene for the theme

2.) content: refers to the deeper meaning of artwork.

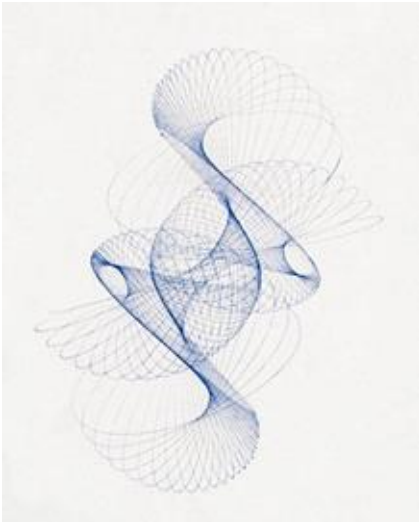
3.) Form: the total visual impact of an artwork. What we use to help subject matter and content connect.

- visual elements
- building blocks
- design principles



The function of Art

- Physical
 - Influencing space or environment
 - Serves a specific physical purpose
 - Architecture
 - mugs
- Personal
 - Self expression: convey individual feelings and thoughts
 - Serves a personal function



- Sharing aesthetic experiences
- social/political
- -social commentary
- -addresses collective aspects of life
- -satire
- -political engagement

Form

1.) elements of design

-building blocks used by artists to create an artwork

Line

shape

space

value

color

Mass

texture



2.) principles of design

-the grammar that brings all the elements together to communicate something

balance

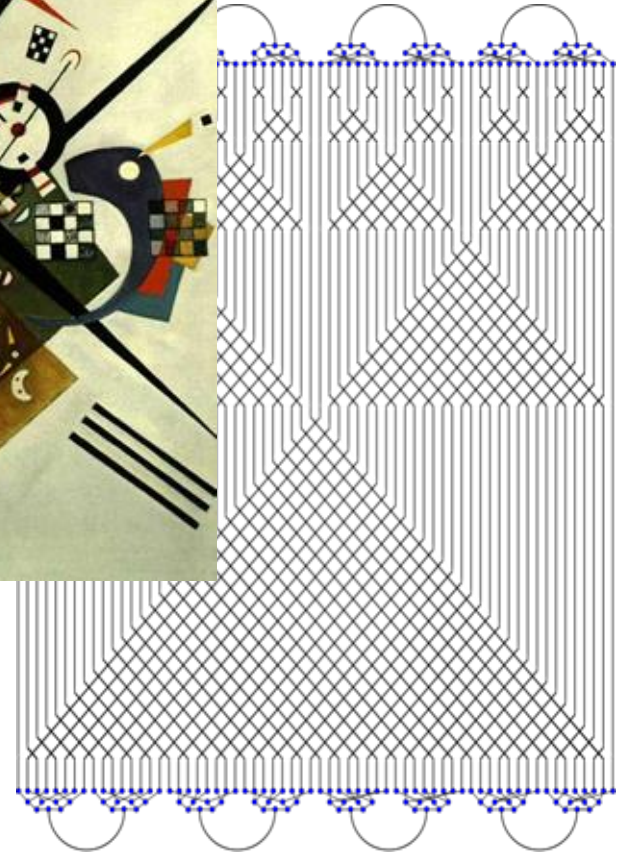
Repetition/rhythm

focus/emphasis/dominance

unity / harmony

proportion / scale

other principles: contrast, variety, movement depth





Introduction to Clay

Introduction to clay:

- Most important qualities of clay
 - Abundance
 - Plasticity
 - Durability

The clay formula:

$Al_2O_3 \cdot 2SiO_2 \cdot 2H_2O$

Aluminum diode → Silicon dioxide → 2 water

- Clay sources
 - Primary clay (residual clay)
 - + Formed at the side of the parent rock; white and free from impurities
 - + Not plastic and is refractory
 - + ex.) Kaolin: major component of porcelain
 - Secondary clay
 - + Transported from multiple sources by water or wind
 - + Uneven particle size
 - + Contains organic materials and other impurities
 - + ex.) earthenware and stoneware



- Clay types

- Earthenware (1)
- Stoneware (2)
- Bone China (3)
- Porcelain (4)
- Paper clay (5)

- Firing (6)

- (1) Earthenware

- Firing temperature: (1832-2166°F) (1100-1180°C)
- Properties: Very forgiving doesn't disappoint
- Applications: slip casting, pressing, throwing, throwing, slab building, coiling
- Appearance: Often brightly colored, can cast high degree of fairness
- + ex.) red earthenware, terracotta

- (2) Stoneware

- Firing temperature: (2192-2336°F) (1200-1280°C)
- Properties very strong, creating art with low porosity, ideal for general use, domestic pottery.
- Applications: slip casting, throwing, slab building
- Appearance: unfired, coarse because of grog



(4) Porcelain

- Firing temperature: (2300-2462°F) (1260-1300°C)
- Properties: Very strong clay body, known for its translucent appearance
- Applications: Slip casting, throwing, slab work; difficult but manageable



- Plasticity of clay:
 - The ability of clay to respond to pressure with continuous and permanent change
 - + Plate like shaped particles
 - + Size of particles
 - + Chemical (electrical attraction between particles)
 - + Presence of carbonaceous particles

Short clay: Lack of plasticity

Fat clay: High plasticity

- Water in clay
 - Free water: (interparticle water) Extra water filling spaces between clay particles. The 1st to dry out at normal temperature. This water bonds the clay particles.
 - Absorbed water: (capillary water) this water clings to clay particles and helps it stay moldable; evaporates as clay dries

- Bond water: (Constitutional water) Looked into clay's structure; only evaporates when fired, usually at 800°F



- 6 stages of clay
 1. slip/ slop
 2. Plastic/ clay
 3. Leatherhard
 4. Greenware/Bone dry
 5. Bisque
 6. Glaze
- Shy of leatherhard
- The same, but greenware, more water



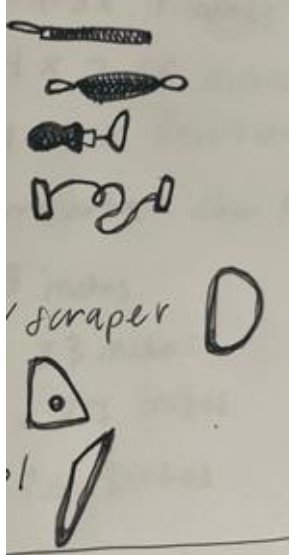
- Different construction methods and techniques
 - Pinch
 - Coil
 - Slab
 - Wheel thrown
 - Slip casting
 - Press molding

- Types of Ceramic Wares

- Functional
- Decorative
- Sculpture
- Installation

- Tools

- Needle tool
- Ribbon tool
- Loop tool
- Wire cutter
- Sponge
- Metal rib/scraper
- Wooden rib
- Modeling tool



- Firing stages:

- Fire
- Firing ranges
- Bisque firing
- Glaze firing

Verification: the firing of pottery to the point of classification

- Kilns:

- Electric kiln
- Gas firing
- Wood firing
- Raku kiln





Test tile project

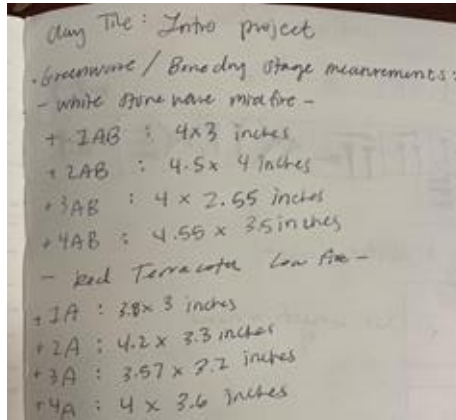
Test Tile Project

This was our first ever clay project.

In this project, we were implored to explore what exactly we can do with clay. What textures, colors, and techniques contribute to the look and feel of the final product.

We were instructed to have 4 red terracotta tiles and 4 white stoneware tiles.

For my stoneware tiles I wanted to create the texture of animals fur. I used a broken chopstick, and angled it in a way in which it would create a sharp hole in the clay. I repeatedly poked the clay this way, and it created a sharp, wolf fur kind of texture.



For my red terracotta, my favorite tile is the diamond hole tile. I was inspired by the maldon salt container. Pictured next to the tiles.

I used the end of a rectangular wood tool and pressed the clay first. Then I used a smaller rectangular wood tool and pressed deeper in the parts of the clay I already pressed into.

The deeper pressed parts start from the middle, and slowly begin to fade out and become lightly pressed. This created a really cool contrasting effect that reflected my inspiration similarly.



Test Tile Project

My second favorite tile is the land and river terracotta tile. I wanted to represent land and water. I explored how I could combine different techniques and methods that contribute to the final balance of the artwork. The scraggly, scratchy “grass” balances well with the smooth, flowing “river”. The soft, mellow lines represent the land and its stability in contrast with the textured, grass and water.



Before our first class, we were assigned to visit one showing at the first art museum. At the museum I saw this beautiful pattern. This installation was called “Printing the revolution.” It examined how graphic arts have been utilized to build community, engage the public around social concerns and wrestle with the shifting notions of the term Chicano. Which Mexican Americans defiantly adopted in the 60’s and 70’s as a sign of a new political and cultural identity.

This pattern was considered in this project as I was thinking about how exactly intricate patterns like this could be translated into a clay work. I

I was also inspired by my fellow classmates; pictured on the right a view of all of our tiles.

A few more inspirations for the tiles....



Back in my junior year of highschool I did a little clay work. This was mainly my inspiration for the land, water tile. As you can see, there are many similar elements from this piece to the tile. The lines, representing land and farming; sowing seeds, etc. The stripe of blue glaze along the piece representing a river and many other elements that show the land humans inhabit.



For the fur tile, I wanted to explore unique ways to portray texture on the clay. This is actually a ceramic garlic grater before it is fired. The grater serves a functional purpose; to grate garlic, but I thought it kind of looked like a flower.

Final Bisque fired tiles



These were my final bisque-fired tiles. As you can see, one of the stone-ware tiles (the fur textured one with a circle) cracked. In retrospect this may be because I pressed too hard on the clay with the circular tool. This made the clay too thin, allowing it to crack.

Overall, I learned a lot about how texture looks on clay before and after firing. I realized that when the clay isn't fired, the texture looks more 3d, while when it is fired, something about the piece becomes more consistent and homogenized.



Building a connection to Clay



It was a beautiful day, and there was a circle of dry clay in piles. We were instructed to first, take off our shoes and sit outside of this circle. Then, we were told to create a coherent, connected circle by spreading the clay out to one another.



As you can see, this classroom is very well lit, indicating that it might be a good place to sketch, observing lights and shadows. This was what the classroom looked like after we cleaned up.

Pinch bowl

After making our dry clay circle, we were now instructed to sit inside the circle, shoulder to shoulder. There, professor Filsoofi handed us a sizeable amount of red clay.

I felt comfortable with this clay due to the terracotta test tiles. This was recycled red clay, so while I was playing with the clay, waiting for the next instruction, I often felt granules or bits and pieces of matter. It was interesting to see and feel the red clay.

Our first instruction was to make a pinch pot out of the clay we were given. We had to use our hands and our fingers in order to create it. Our palms, the fleshy mound on the base of our thumb and our thumbs and ring fingers was primarily used to create this bowl.



Crumpled piece

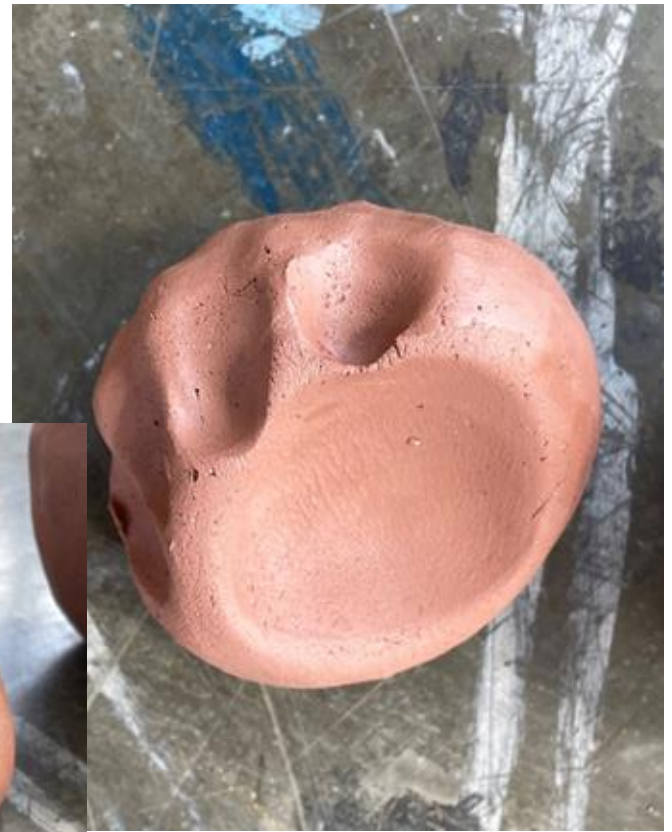


Next we were instructed to make another pinch bowl after being given more clay. I don't remember exactly the instructions, but I remember we had to deform and destruct it in some way.

Collaborative work

Finally, for our last piece, we had to work collaboratively with a partner. We could not hold the clay together, instead we had to hold the clay using the force of our hands/ other parts of our body.

Since we could not form the clay by holding it with our hands, My partner and I used our elbows, fingers and the sides of our hands to create the piece. There was several times where we were very close to dropping the clay.



Blind, collaborative pinch bowl

Next, my favorite part of the day, was the blind collaborative pinch bowl. We were instructed to make a pinch bowl with a partner, while closing our eyes.

It was awkward at first, but we started to get the hang of it. Sometimes our hands would run into each other, and then both of us would retract our hands to give each other some space. There would be a couple pauses here and there because of this. Towards the end, I think both of us trusted each other enough to keep building and shaping despite our hands touching again. It was cool to see how comfortable we got with collaborating, despite not being able to see. Honestly, I think it would have been even more awkward or uncomfortable if both of us could see. It felt good to trust my partner, and to trust people.



Overall

These were all the pieces made that day. The very textured pot with thin, protruding pieces was another activity we did. I really enjoyed this day and I felt good afterwards. I felt more comfortable in working with clay and I trusted myself more than before with this medium.



Pear Project



Pear Project

For our next project, we made raku-fired pears. These pears were going to be hand built, with white raku clay. Raku clay is a clay that is heated very quickly, just enough to melt the glaze. It was a new clay, so I was excited to see what it would look like out of the kiln, and with glaze.



This was the pear I was given. It was kind of small compared to my classmates pears and the shape of the pear, next to the stem had an interesting bump. I wondered how it would translate to clay.



We made the pears by creating a mold from our recycled red clay. By turning the red clay into a disk, and then imprinting the bottom of our pears into the clay, we created a good starting point for coil building.

I wanted to make mine as realistic as possible. The shape of the pear I feel is pretty accurate to my real pear, so I am happy about how that turned out.

Surprisingly, the coil building was not as hard as I had thought. As I rolled each coil and stacked it onto the previous build, smoothing it and making sure everything is connected, I slowly started to see the pear come together.



Our finished pears were almost ready for the bisque firing. It was cool to see all of the pears together. It looked like something from the bible.

We had to put wax in the divot along the stem to ensure that it does not crack. This part, if I remember, tended to be thin so the wax would protect it during firing.

Raku Firing



Watching how the pears were fired was stressful, I can't imagine how it was to be the one firing them. (thank you professor and Reza)

As you can see, circled in red is the raku kiln. It looks almost like a medieval contraption. The pears were loaded into the kiln, and very quickly they came out, was placed in a bed of paper, and then was cooled down with water.

The process was fast and I watched my classmates faces as we began to decipher which pears were ours.

The finished product

I learned a lot from this project. I think technically, I learned how to build a hollow clay piece. I always wondered how sculpturists/ceramists hollowed out their pieces. Turns out it was never hollowed out, many of them were just built using the coil building technique.





Coil Project

For this project, we were instructed to create a tall vase/sculpture using the coiling method.

Coil Project

The Jomon period
(14,000 to 300 BC)

This project is directly related to the jomon period of ceramics.



The jomon period is a distinct time in ancient Japan where people produced pottery characterized by intricate cord-marked decorations.

The word "Jomon" itself means "cord pattern" in Japanese, signifying the technique used to create the designs on the pottery.

The distinctive Jōmon pottery was shaped from unrefined low-fired clay. The potter's wheel was unknown, proving that manual methods were utilized, particularly the coiling method

Coiling: preparing the clay in the shape of a rope and coiling it spirally upward.

Coil Project

- When I made this project, I wanted as many details as possible. I used several different tools to achieve this. The needle tool was used to create lines. The ribbon tool was used to create texture, divots and holes. The plastic modeling tool was used to smooth the surface and the sponge was used for this purpose as well.



Coil Project

The white parts of the piece is a special material that creates even more texture, so I made sure to incorporate that in. The wooden tool I am using was exceptionally useful to widen lines I had previously made with the needle tool. I have a ball of clay next to me at all times to add details and things.



This project was challenging because I wanted a lot of detail. Everything I added was pretty intuitive/a mistake. I was really experimenting with this project and pushing the limits of what is possible with clay. The dainty ropes of clay coming out of the piece was very risky, but it was one of my favorite parts of the project, so I was determined to keep it.





By the end, I ended up with a very detailed pitcher :) I really ended up liking how it came out before the bisque firing.

I feel like the color of the clay matched really well with the designs and the ring was a risky success.

The shell pattern was enjoyable to look at and when I turned the piece, I could find something new each time; which was the goal of this piece.

Final product



After applying patina, and doing random slip experiments, this was the final product.

I did not prefer the final look over the freshly finished look before bisque firing, but I am glad I at least learned a few things. I learned that...

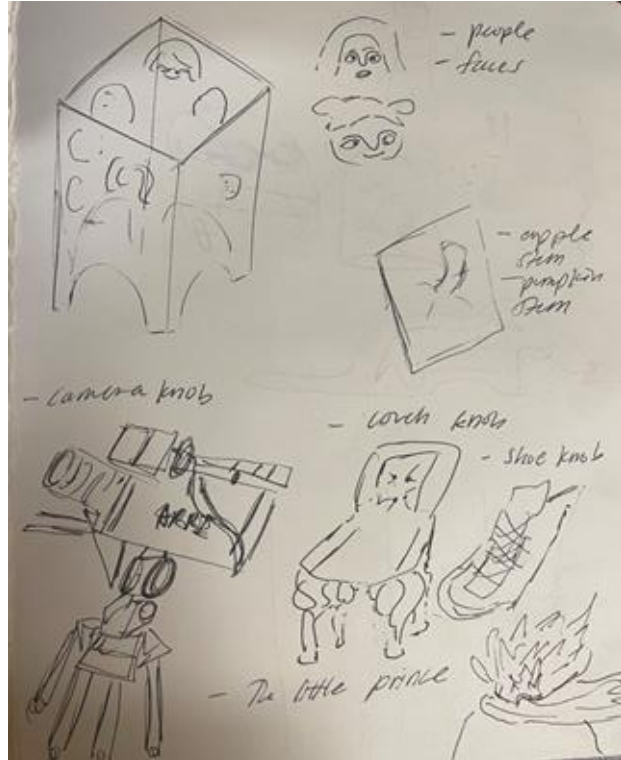
Slip, petina, glaze anything you do after bisque firing is **Permanent!** I knew this going in, but I wanted to just see what the red would look like if I had applied it to the surface of the swirl. Or what would change about the piece if I made the shell blue. Now I know that experimentation with techniques after bisque is not preferred, and that a little planning would benefit the piece much more. An intuitive strength quickly became a lesson of self control and slowing down.



Slab project: Box

Slab project

Planning and brainstorming



After drawing a few more knob/handle ideas, I drew a film camera, and from there I decided the idea to portray some of my favorite movies onto the piece.

I was really excited for this project. I liked the idea of having my own box and being able to keep anything I wanted in it. Professor told us before brainstorming to “make it for yourself and nobody else,” so I was determined to make that approach when planning for this project.

I knew I wanted something very personal to me, not something that just looked good or was aesthetically pleasing.

At first, I thought to make something whimsical like having a chair as the knob/handle or a apple stem and faces all around the piece, but I didn't connect with the idea after a few sketches.



I ended up really liking my camera handle idea, so I decided to make that first.

Now I had to choose what movies I wanted to portray on the walls of the piece.



To make the slabs, we had to cut out a template. Our class worked collaboratively to make even slabs of red clay on the rolling machine that compressed the clay into slabs. From there, we used a knife to cut each side of the box.

To connect each side, we used a intricate process of scoring, slipping and molding





For the movies, I chose 3. From top to bottom the movies are:

Anatomy of a fall

Ladybird

Little miss sunshine

I decided on these movies because they held a special place significance in my life. When I look at my box, I hope to be reminded of the lessons I learned after finishing these movies.



I started with the Anatomy of a fall side. This scene portrays a moment of admiration, connection and gratefulness between the two characters. Their relationship, platonic now, still speaks to a once romantic time between the two.

I carved the image using a pin tool and a micro pin tool. I used slip before bisque firing, petinad the piece, and glazed with yellow on the legs and clear on the hair and the blue window.





Ladybird depicts a complicated relationship between a mother and daughter. A story about love, acceptance and teenagehood. I did the exact process as the anatomy of a fall side, except I added some texture right above the legs. I felt the piece lacked texture, so I decided to add this exact texture on certain parts of the piece.



Little miss sunshine tells a story about a little girl, a self serious teenager, a suicidal uncle and a desperate father. It addresses myths about the American dream, beauty standards and doomerism by creating tragedy into a refreshing, comedic entity. As you can see, I introduced the same texture and really made it the focal point of this side. I really like how this side turned out. The petinad characters look amazing and the clouds look vibrant.



The final piece



Wheel throwing

Wheel throwing

1. Wedging the clay: gets rid of bubbles and homogenizes the texture.
2. Attach bat to wheel and throw down clay ball
3. Turn the wheel apply pressure with a finger from the edge of the clay to the surface of the bat. This ensures proper connection between the clay and the wheel/bat.
4. Center clay: Pull it up into a cone shape and compress using thumbs and palm.
5. After centering, make a hole in the center of clay using thumbs.
6. Compress to ensure that the base of the piece and the walls are properly connected; this prevents cracking.



Wheel throwing

7.) Pull up the clay; this builds the walls of your piece. You can use your pointer fingers by pinching the walls. A sponge is also appropriate.

8.) Once walls are up, Don't touch the piece too much and tire out your clay! But, perfect the details, and use wooden modeling tool to separate the base from the bat.



Trimming

Trimming is done after the piece is dried and is in the leather hard stage.

1. First the piece must be centered on the wheel. Since the wheel will be spun, you need to secure your piece on the wheel.
2. Using a ribbon or loop tool carve thicker areas of the vessel.





Glaze

Glaze

What is Glaze?

- Glaze is just a layer of glass fused to the ceramic surface
- Glass former: Silica - is the most important; Highly resistant to heat. (melting point: 3092°F (1700°C))
- Fluxes: Lowers the melting temperature of silica to between 1472°F - 2372°F (800 - 1300)
- Refractories: A glaze consisting of just silica and flux would be too fluid; therefore, the refractories are required to stabilize the glass and aid adhesion to the object. Alumina is the main ingredient.



- Fluxes: Frits and Feldspar
- Refractories: Feldspar = matte
- Glass former

Feldspar

- Feldspars are minerals of varying composition. They are used in clay bodies and as a flux and alumina source in glazes.
- @ high temp, feldspar on its own, will melt into a thick milky glass
- ex.) Potash feldspar

Types of purchasing glazes:

- 1.) Commercial glaze
- 2.) Studio made glaze



Surface quality

- Matte glaze, satin matte glaze, Stony matte glaze, Dry matte glaze
- The ration of the chemical and mineral and temperature can change the surface qualities dramatically.

Primary Colorant Agents in Glaze

- Oxides: An oxide is a chemical compound that contains at least one oxygen atom and one other element in its chemical formula.
-ex.) Cobalt oxide, cobalt carbonate, copper oxide, copper carbonate
- Stains: (commercially produced, made by oxides.) Are fired blends of metal and ceramic oxides that have been reground into a fine powder. Stains containing otherwise toxic oxides can be employed without significant danger.



The three main factors affecting glaze color

- 1.) The composition of the glaze. Not only including colorants, but also other glaze materials that interact and affect the glaze.
- 2.) The temperature
- 3.) The kiln's atmosphere

Thermal expansion: Most materials expand during the firing and contract during cooling. A glaze and a clay body have different thermal expansion since they don't have the same chemical make up.

Crazing

Shivering

Crawling

Blistering/Bloating/Bubbling: firing too fast, cooling too fast

Pin holing: unclean surface, oily hands



Properties of glaze

- Viscosity: this occurs when the glaze is fired high enough to cause a viscous liquid melt.
- Low viscosity: the glaze could run off the place onto the kiln shelf
- High viscosity: Result is stiff, not fluid enough to melt well.
- Durability: the composition and firing temperature determine whether a glaze will become more or less sensitive to damage.
- low fire glazes are often less durable, bc of flux

Types of Glazes

- Low fire glazes: cones 022-01
- Medium fire glazes: cones 1-7 Bisque (06-04)
- High fire glazes: cones 8-13

Types of glaze application

- pouring, dipping, brushing/painting





Mugs and Cups

Mug and Cups

Inspiration

When I began my designing process, I knew I wanted the presence of lines and patterns on the cups. I knew that these would serve a functional purpose, so I made sure to make a simple, functional design.



These were some of the inspirations I took from. The image showing various textured mugs, did not have a original artist.

The blue and white cups are by Murphy pottery, a small ceramicist.

The bowl with black etchings is by Hakame Chawan, a Japanese ceramicist.



Final Mug and Cups



This cup is one of my favorite pieces of the semester. I used 2 coats of white glaze and I am very happy with how it has turned out. The white looks really good with the design. I used a micro-loop tool to carve out the lines individually. It was laborious but I wanted to make another one after getting the results back.

I wanted to bring the pattern I used in my box back into these pieces. For the green cup pictured to the left, I utilized the same pattern. I am hoping it can show consistency and a common theme throughout my pieces. I first put green glaze on the patterns and then I covered the whole piece in clear glaze. I added white glaze inside, and then used a brush to paint the green stripes.



Final Mug and Cups



For this mug, I used white glaze and floating blue for the inside of the cup and the outside pattern, as well as the handle. The build of the mug was quite dense and heavy, but the functionality was great. I liked the combination of the floating blue and the white.

This blue cup was my first cup. I really enjoy how the glaze came out on this one. The rim of the cup is my favorite. I put a dark blue underglaze after bisque firing and then put the floating blue glaze on top. Inside the cup I believe I put a mixture of floating blue and gold.



Recognitions: Sources

YYYY <https://jomon-japan.jp/en/learn/jomon-culture>

YYYY <https://www.britannica.com/topic/Jomon-culture>

YYYY

Hakame Chawan

Thank You

ARTS 1400: Ceramics