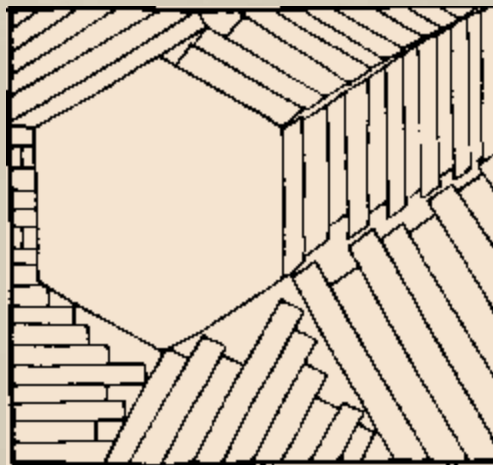


Introduction to Clay



Not Your Ordinary “Mud”



Warm up:

- What is clay?

Not Your Ordinary “Mud”

- List as many different emotions as you can.

Part I: What is Clay?

At the end of the section, you will be able to . . .

... define clay.

... describe the natural process that form clay.

... identify primary and secondary clays.

... Identify porcelain, stoneware, and earthenware as being primary or secondary clays.

Clay Terms to Know

- Clay
- Weathering
- Primary Clays
- Secondary Clays
- Porcelain Clay
- Stoneware Clay
- Earthenware Clay

DEFINITION

Clay is . . .

. . .a fine mixture of decomposed igneous rock minerals and organic matter

[Igneous Rock](#)

How is clay formed?

1. Melted rock is cooled and solidified into igneous rock (mother rock) which makes up earth's crust.
2. Mechanical weathering over millions of years breaks down the rock from boulders into stones, to pebbles to fine, small particles.
3. Erosion aids in moving particles away from the site of origin resulting in 2 types of clay deposits.

Mechanical Weathering actions include...

1. Freezing and thawing
2. Grinding of glaciers
3. Pounding of rain
4. Flow of rushing streams
5. Probing of tree roots
6. Acidic reactions

2 Types of Clay Deposits

1. *Primary Clays*
2. *Secondary Clays*

Primary Clays

- Clays which remain at the site (mother rock) where they were formed.
- Fewer impurities
- Coarser grained texture (less weathered)
- Needs to be fired at a very high temperature
- Low plasticity (harder to work with)
- Whiter fired color (Porcelain)

Primary Clay Example: Porcelain

- Bright white clay – very pure
- High Fire – matures at 2419 degrees F.
- A very hard clay
- Smooth – very fine, not as plastic
- Feels very dry (harder to throw)
- Still white when bisque



Secondary Clays

- Clays which have been transported by wind, glacier, water, etc. away from site of origin
- Finely ground (more weathered)
- Contaminated with organic matter
- Stoneware & Earthenware

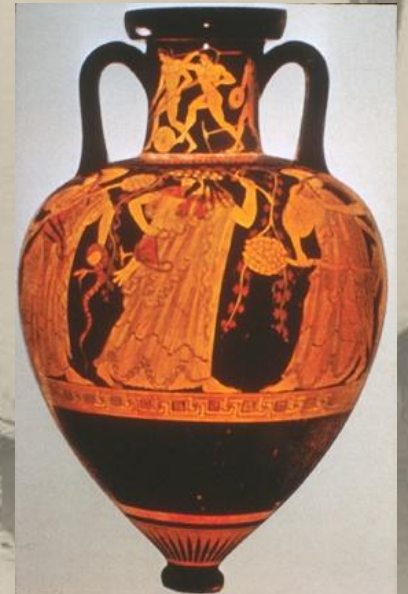
Secondary Clay Example: Stoneware

- Gray to tan or brown when moist
- Non-translucent
- Matures at 2232-2381 degrees F.
- Pinkish color when bisque
- Very durable = dinnerware safe
- Used by Burke Pottery



Secondary Clay Example: Earthenware

- Reddish brown clay that matures at a low temperature (approximately 1830 degrees, which is red hot heat.)
- Also known as terra cotta (baked earth)
- Flower pot clay
- Remains porous



Identify the Clay Body Type (How do you know?)



Why would we use _____ in NC?

What is wedging?

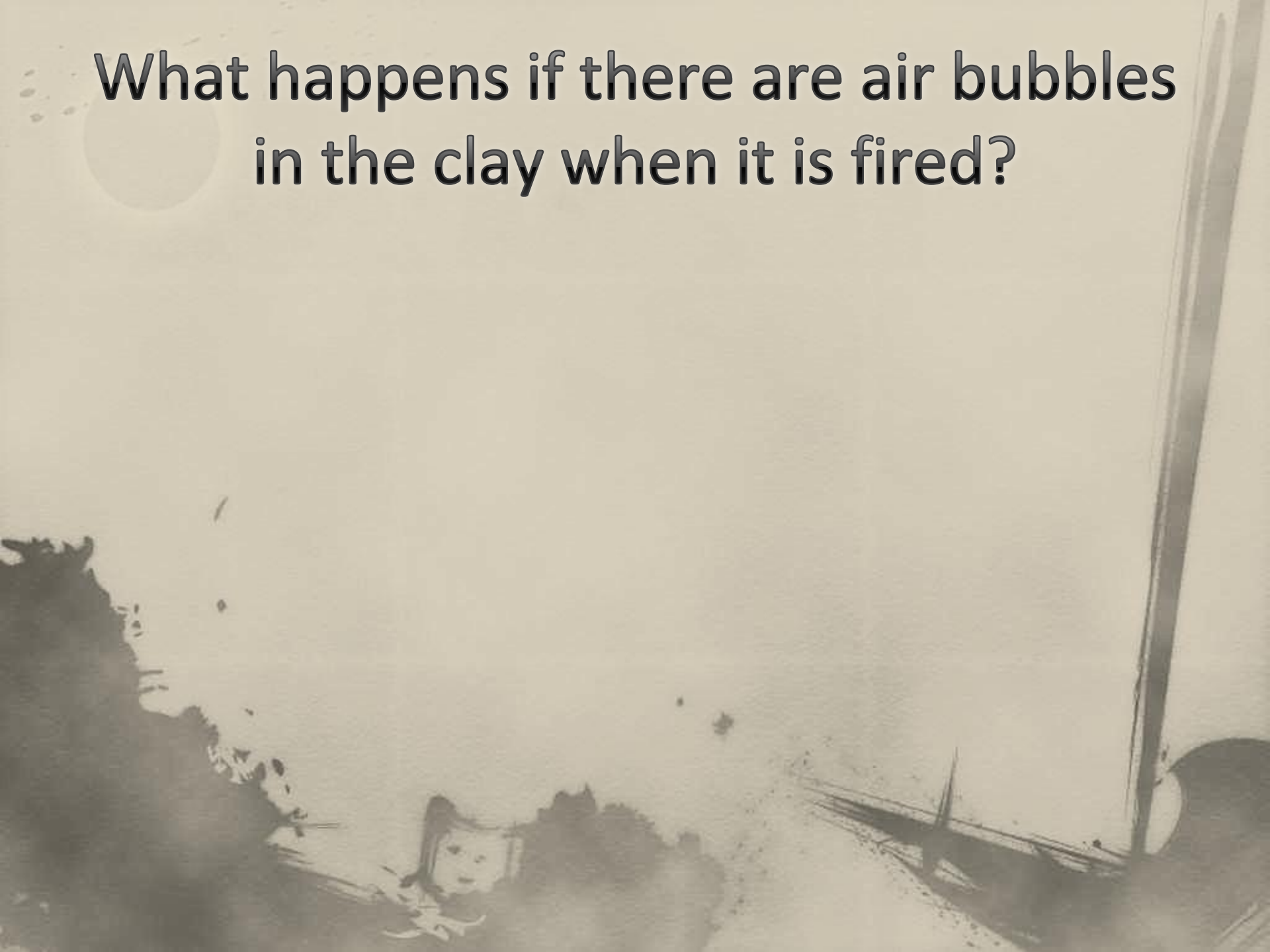
Method of kneading clay to get rid of all air pockets.

How does wedging help?

1. Aligns clay particles
2. Equalizes moisture
3. Removes air bubbles
4. Makes clay texture uniform

Tip: You should always wedge first before using your clay.

What happens if there are air bubbles in the clay when it is fired?



The background of the slide features a faint, artistic illustration of a person in a boat on a body of water. The person is positioned in the lower-left quadrant, and the boat is in the lower-right. The overall style is soft and painterly, with muted colors and visible brushstrokes. The text is overlaid on this background.

At the end of this section you will be able to . . .

- ... identify and list the various processes for transforming clay into ceramic forms.
- ... identify and categorize the physical characteristics of each stage of clay.

Clay Terms to Know

- Wedging
- Firing
- Kiln
- Slurry
- Wet
- Leatherhard
- Greenware
- Bisqueware
- Glazeware

Mixing & Recycling Clay

Clay may be recycled up through greenware stage.



Firing: The Electric Kiln

- The Kiln is a chamber to heat clay
- It creates chemical changes to the clay and glazes which create greater strength.



Firing

This is the process of heating the pottery to a specific temperature in order to bring about a particular change in the clay or the surface.

The Firing Cycle

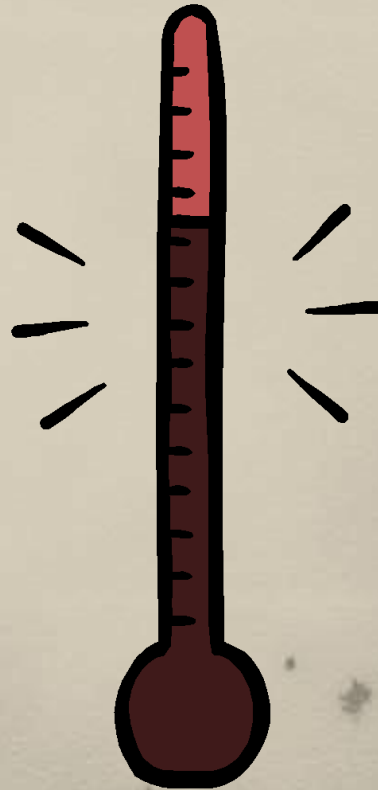
8-12 hours to heat

+ 8-12 hours to cool

16-24 hours for firing cycle

Firing Temperatures

Stoneware
2200 degrees F



Porcelain
White Hot Heat
2400 degrees F.

Earthenware or
Bisqueware
Red Hot Heat
1800 degrees F.

Important Tip!

After the clay has been fired it
CANNOT be recycled!

Stages of Clay

1. **Slurry/Slip (potter's glue):** Liquid clay
2. **Wet/Soft:** Plastic clay
3. **Leatherhard:** not easily distorted, maintains form and can be smoothed, carved, and added to
4. **Greenware (bone-dry):** Water is evaporated; and is brittle.
5. **Bisqueware:** fired –once.
6. **Glazeware:** fired more than once with glaze on it

Glaze

- A glass-like surface coating for ceramics that is used to decorate and seal the pores of the fired clay.

Different types of forming clay

- Hand building
- Wheel throwing
- Molding

The background features a soft, sepia-toned illustration. In the upper left, a large, pale sun with faint rays is visible. Below it, there are dark, silhouetted shapes representing trees or bushes. In the lower right, a dark boat is shown on a body of water, with a vertical pole or mast extending upwards. The overall style is minimalist and artistic, with a focus on light and shadow.

Hand building

- Pinching

- Coiling

- Slab building

Pinching

"Pinch" in ceramics is a method of shaping clay by inserting the thumb of one hand into the clay and lightly pinching with the thumb and fingers while slowly rotating the ball in the palm of the other hand.



Coiling

This is the technique of building ceramic forms by rolling out coils, or ropes, of clay and joining them together with the fingers or a tool.

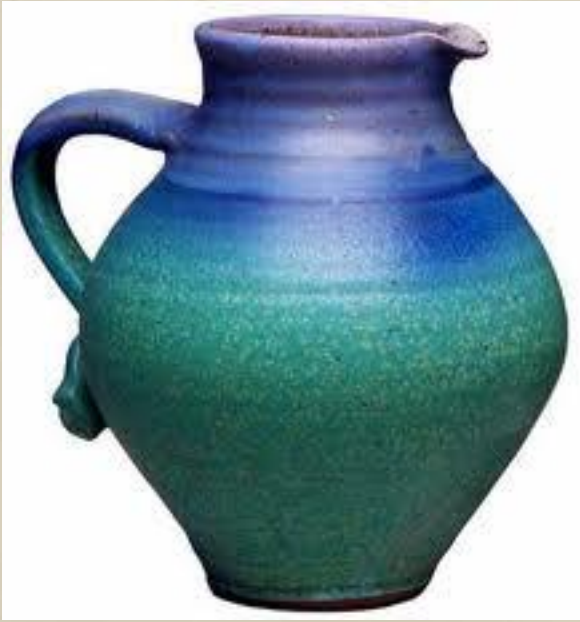
- Start with a base
- Build up the vertical sides with one coil at a time
- Carefully joining each coil to the other one below by smoothing with hands
- You can leave the coils visible or invisible as you build up. It is important if you leave the coils visible on the outside that you make sure to securely join the coils on the inside of the container.



Slab building



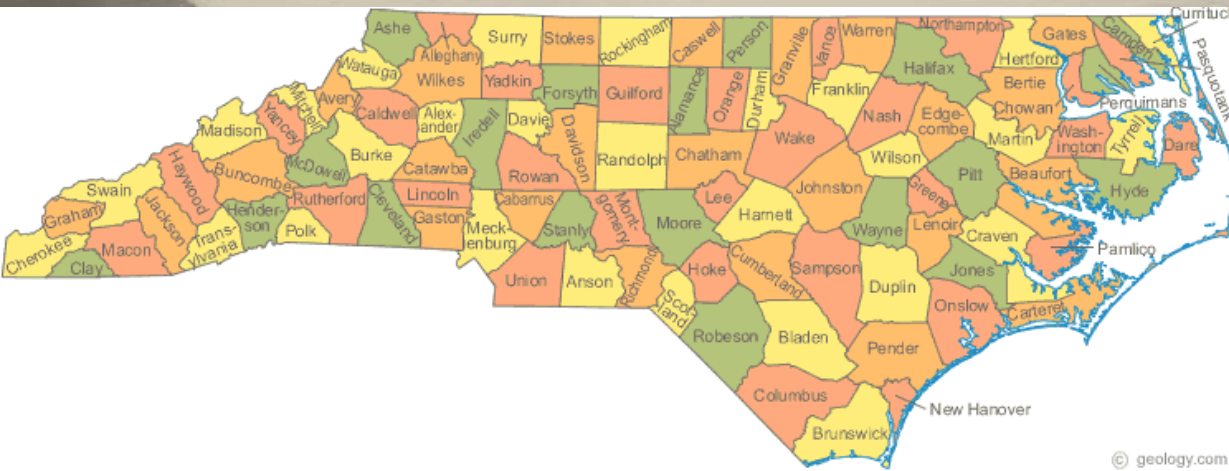
- you can roll and stretch the clay as if it were pizza crust! The objective is to make the slab of clay of uniform thickness.
- Slab construction is useful for making box shapes. You may also make a circular base.
- When you have cut your base and sides you will join them with a process of scoring. Using a paper clip or pencil, scratch across hatched lines into the edges to be joined.



North Carolina Pottery



- North Carolina has had a pottery industry since colonial times.
- Why is North Carolina know for its pottery?
- Potters are located in Valdese, Lenoir, Hickory, Morganton, Lincolnton, and Vale.



FACE JUGS



- Perhaps the most unique piece of southern pottery is the Face Jug.
- The history of southern face jugs starts with slave potters in the Edgefield region of South Carolina before the Civil War.
- Today it is one of the most popular Catawba valley pieces.

African American Tradition

This is a face jug made by an unidentified African-American slave around 1850.

Enslaved African-Americans made bricks and pottery for use on the plantation. In their spare time, they created clay vessels with faces. These objects were highly prized in the community. They were passed down from one generation to the next.

Other North Carolina potters also made face vessels. Perhaps they saw these small vessels and tried to make a face on one of their jugs.”





drexelantiques.com





Late 1970s, early 1980s Burlon Craig
1/2 Gallon face jug. Alkaline glaze,
wood fired



8 Inch Burlon Craig Snake Jug. Marked
B.B. Craig, Vale North Carolina on the
bottom.



■ Contemporary face jug by Charles Lisk, Charlie is a skilled potter who has been working in Vale for many years. Every one of his face jugs is a bit different.

■ Crying Eye



Steve Abee Devil Swirl face jug. 15 inches tall



Joe Reinhardt - Hear No Evil, See No Evil, Speak No Evil three face jug.



Gary Delp, Valdese, NC. Gary was a pottery teacher for many years who recently retired. He now makes pottery in his spare time. First one is 7 inches tall, second is around 13 inches. Wonderful expressions!



Three face jugs by Dale Costner from Shelby, North Carolina. 8-9 inches tall



12"



- Doug and Vickie Brim have a combined 20 years of pottery making experience. Doug's passion is making face jugs and Vickie is an expert at turning out all of those jugs for Doug to work his magic on. Vickie also makes beautiful sun candle pots and braided baskets.

Choose an emotion

Anger Curiosity Desire

Despair Determination

Disgust Embarrassment

Envy Fascination

Fear Frustration Guilt

Happy Hate Joy

Loneliness

Love Sadness

Sympathy

Design 6 different face jugs that show an emotion

- Design the shape of the jug first and then the face.



eMotions

aggressive	alienated	angry	annoyed	anxious	apathetic	bashful
bored	cautious	confident	confused	curious	depressed	determined
disappointed	discouraged	disgusted	embarrassed	enthusiastic	envious	ecstatic
excited	exhausted	fearful	frightened	frustrated	guilty	happy
helpless	hopeful	hostile	humiliated	hurt	hysterical	innocent
interested	jealous	lonely	loved	lovestruck	mischievous	miserable
negative	optimistic	pained	paranoid	peaceful	proud	puzzled
regretful	relieved	sad	satisfied	shocked	shy	sorry
stubborn	sure	surprised	suspicious	thoughtful	undecided	withdrawn

The Ten Golden Rules of Ceramics

1. 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.
2. Keep your area clean, clay scraps off the floor and clean with water and a sponge.
3. Clay can be no thicker than your thumb.
4. In order for clay to stick together it **MUST** be scored and slipped together while the clay is moist or leather hard.
5. Wedge clay to remove air bubbles, achieve uniform consistency, and to line up the particles of clay.
6. Trapped air can cause clay to explode. So hollow out sculptural forms and put needle holes from the bottom so air can escape.
7. Don't glaze the bottom of a piece.
8. Always handle your project with two hands at all times. In other words BE CAREFUL it's your hard work.
9. NEVER HANDLE ANOTHER PERSONS WORK EVEN IF IT LOOKS COOL
10. HAVE FUN AND FOLLOW DIRECTIONS

A sepia-toned illustration of a landscape. In the upper left, a large, pale sun or moon is visible, surrounded by faint, radiating lines. The ground is dark and textured, suggesting a rocky or uneven terrain. In the lower center, a small, stylized figure with a pointed head and a simple body is visible. To the right, a tall, thin, dark structure, possibly a tower or a pole, extends vertically. The overall style is that of a vintage illustration or a photograph of a drawing.

The End