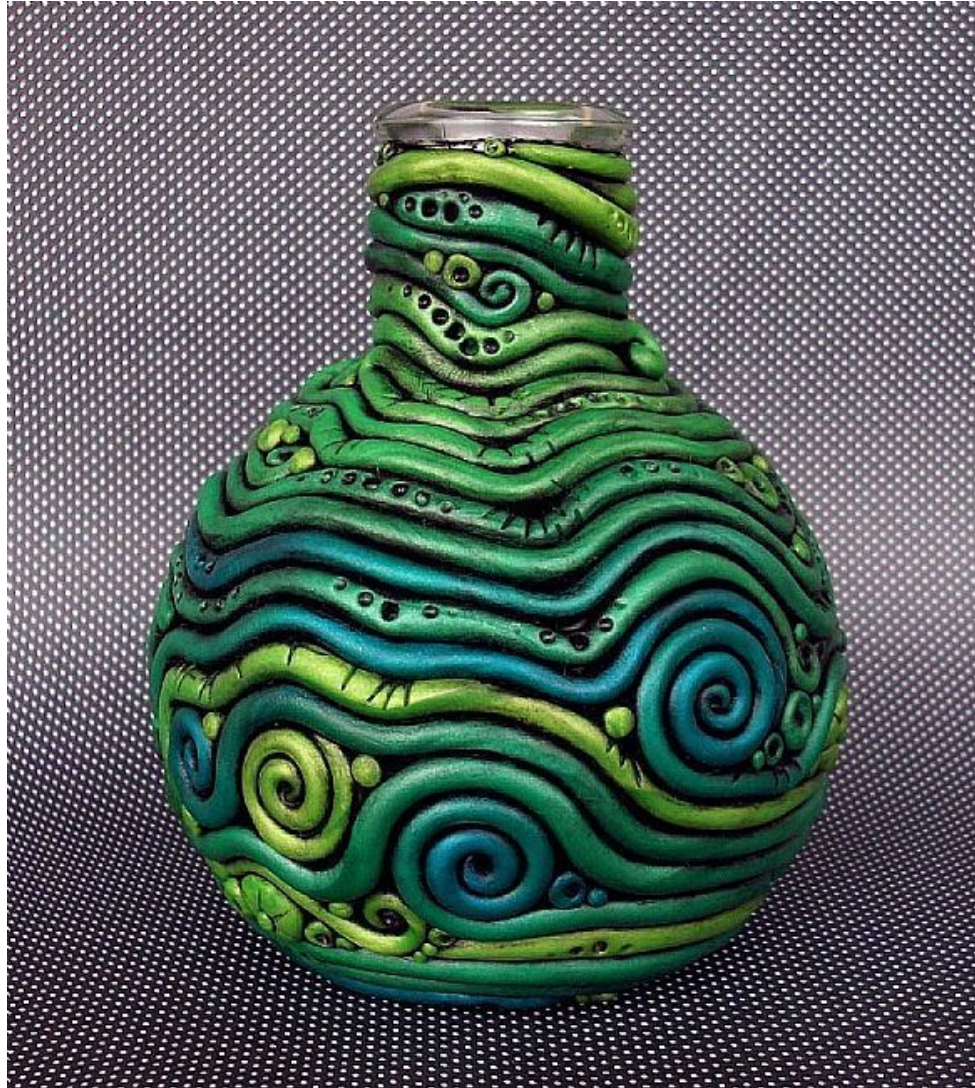


Coil Pot



3-22-16 Clay Vocabulary

1. Clay-

2. Clay Construction Techniques

- Coil-
- Pinch-
- Slab-

3. To attach clay together

- Score-
- Slip-

Clay Vocabulary

4. Wedge-

5. Wire Cutters-

6. Kiln-

7. Pencil Thickness-

8. Bisque-

9. Glaze-

10. Process of Clay

1.

2.

3.

4.

5.

6.



Whistling Fish
Pottery
\$350
2013

Etsy.com

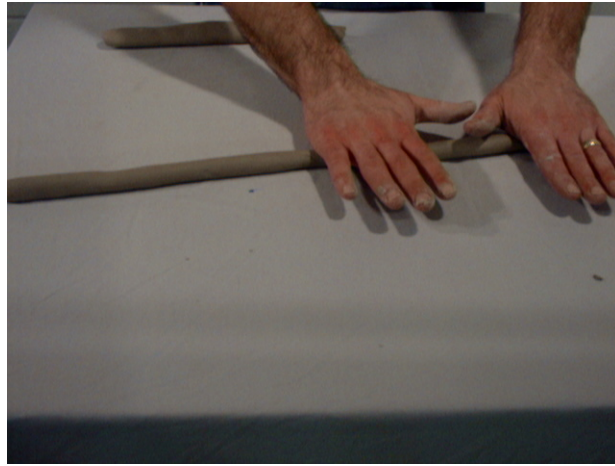
1. Clay

Ceramics/Pottery/Clay

a type of soil made from decomposed rock that will turn to a stone- or glass-like material when heated to high temperatures.

2. Clay Construction Techniques

- **Coil**- long pencil-thickness pieces of clay
- **Pinch**- a ball of clay shaped to form a bowl
- **Slab**- clay is rolled flat to build



Coil Technique

<http://www.jhpottery.com/jhpottery.html>





Coil Pots



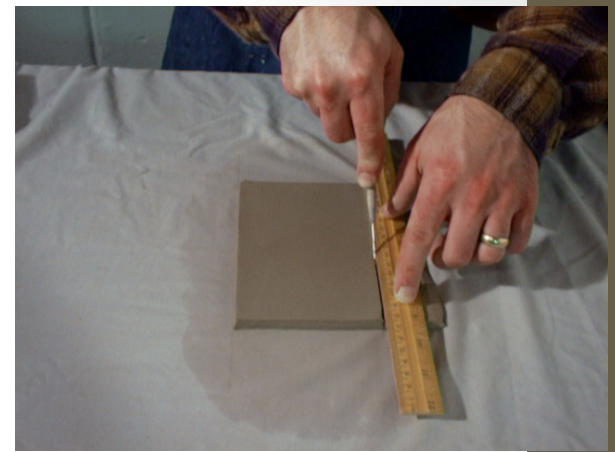
Pinch Technique

<http://www.jhpottery.com/jhpottery.html>

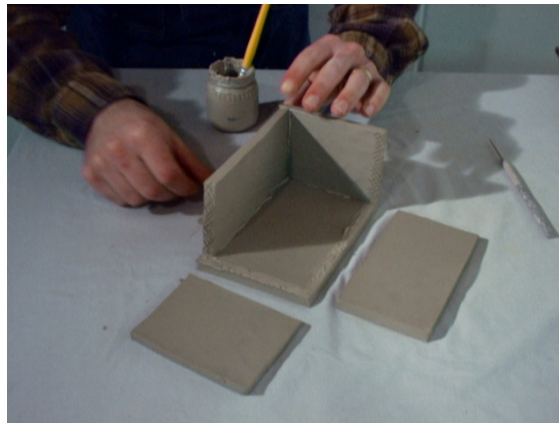
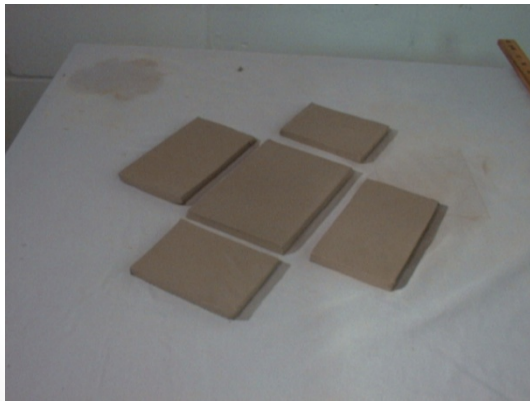


Pinch Pots





Slab Construction



Slab



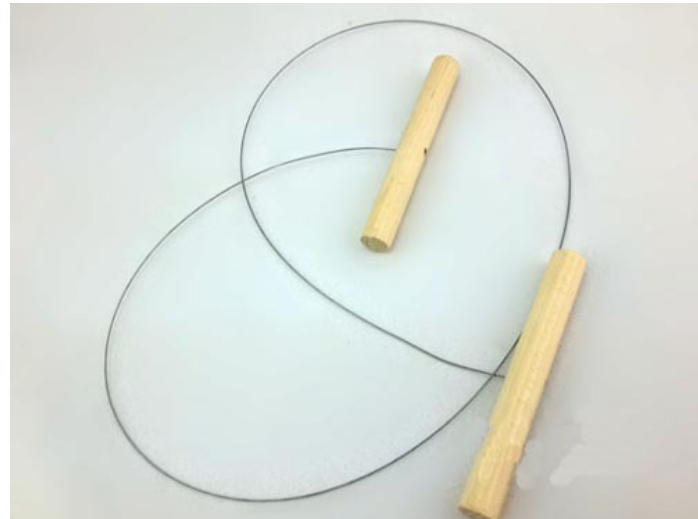
Slab built clay lamp, Nigeria.



3. To attach the clay

- **Score**- to make scratches in the clay, to break the surface area
- **Slip**- water is added to clay to make a “glue” texture and is used to attach two pieces of clay together

4. Wedge- kneading the clay to remove air bubbles and aligning clay particles



5. Wire Cutters- Tool used to cut clay, has handles

6. Kiln

Electric machine that heats clay up to 2500 degrees F



KILN FIRING CHART

Firing converts ceramic work from weak greenware into a strong, durable form. As the temperature in a kiln rises, many changes take place in the clay; and understanding what happens during the firing can help you avoid problems. The following chart provides highlights of what happens when firing clay.

Temperature		Color	Cone (approx.)	Event
C°	F°			
1400	2552	Brilliant white	14	End of porcelain range
			13	
			12	
1300	2372	White	11	End of stoneware range
			9	
		Yellow-white	7	
1200	2192	Yellow	5½	End of earthenware (red clay) range
			4	
			2	
1100	2012	Yellow-orange	1	Between 1100-1200°C, mullite and cristobalite (two types of silica) form when clay starts converting to glass. Clay and ceramic particles start to melt together and form crystals. These changes make the material shrink as it becomes more dense. Soaking (holding the end temperature) increases the amount of fused matter and the amount of chemical action between the fluxes and the more refractory materials.
			04	
		Orange	05	
1000	1832	Red-orange	06	
			07	
			08	
900	1652	Cherry red	010	Between 800-900°C sintering begins. This is the stage where clay particles begin to cement themselves together to create a hard material called bisque.
			012	
			013	
800	1472	Dull red	015	Between 300-800°C, the temperature must be raised steadily and ample air must be present to permit the complete burning of carbonaceous materials (impurities in the clay along with paper, wax, etc.). After 800°C, the clay surface will start to seal off, trapping unburned carbonaceous materials and sulfides, which could cause bloating and black coring.
			016	
			017	
700	1292	Dark red	018	
			019	
			020	
600	1112	Dull red glow	021	Quartz inversion occurs at 573°C. When clay is refired for a glaze firing, quartz crystals change from an alpha (α) crystal structure to a beta (β) crystal structure. The inversion is reversed on cooling. This conversion creates stresses in the clay so temperature increase and decrease must be slow to avoid cracking the work.
			022	
500	932	Black		
400	752			Between 480-700°C chemical water (referred to as "water smoke") is driven off.
300	572			
200	392			Upon cooling, cristobalite, a crystalline form of silica found in all clay bodies, shrinks suddenly at 220°C. Fast cooling at this temperature will cause ware to crack.
100	212			Water boils and converts to steam. Trapped water will cause clay to explode so all water should be evaporated below 100°C. Begin a firing by keeping the kiln below 100°C until all water has evaporated.

Clay Vocabulary

7. Pencil Thickness- clay should not be thicker than this

8. Bisque- clay which has been fired once, but not glazed

9. Glaze- Glass coating to make clay waterproof, powdered chemicals + water

10. Process of Clay

1. **Plastic**- wet clay

2. **Leather Hard**- not moldable, but can carve

3. **Bone Dry**- no more moisture, FRAGILE

4. **Fire in the Kiln**

5. **Glaze**- glass coating, waterproof

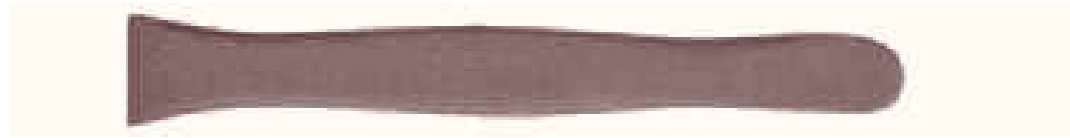
6. **Fire in the Kiln #2**

Wood Tools

Pointed



Flat



Comb



Wood Ribs



Clay Set

Wooden rib,
steel scraper,
wood modeling tool,
needle tool,
ribbon tool,
loop tool,
sponge,
and wire clay cutter.



11. Clay Rules

1. Pencil Thickness
2. Slip & Score
3. No trapped air!
4. Cover clay with plastic bag every night (until finished)
5. Clean up your table every day.
6. Recycle all clay!

Clay Portrait- Old to Young

- <http://ceramicartsdaily.org/pottery-making-techniques/handbuilding-techniques/ceramic-sculpture-video-the-curious-case-of-benjamin-ballclay-see-an-old-man-become-youthful-in-under-two-minutes/>

Armadillo

