10B and 10A Unit 1 Test
will be based on the following information: Clay, Glaze, and Firing

Clay:
1. What is clay?
2. What are the different stages?
3. What makes clay unique from ordinary dirt?
4. What are the three primary types of clay?
5. Terracotta is an example of what type of clay?
6. Is terracotta a low fire or high fire clay?
7. An example of a pure, highly refractory, acid resistant clay body is?
8. What happens to clay when it is overfired?
9. What happens to clay when it is reduced?
10. What is the difference between a slip and an engobe (underglaze)?
11. What is the difference between a slip and a glaze?
12. What are 6 ways of forming clay.
13. What is the best technique for attaching clay? When is the best time to attach?

Glaze:
1. What is glaze? What are the three main components?
2. What is a frit? An example is ________
3. What is a feldspar? Three examples are ________
4. Another name for silica is ________
5. Why do some glazes run a lot? What is a eutectic?
6. How do we describe glazes, types?
7. What happens to a glaze when it is reduced?
8. What are the most common oxides: To get blue ________, to get tan ________, to get brown or yellow ________, to get green ________?

Firings:
1. How do we measure the temperature of the kiln? Why is one method better than the other?
2. How do pyrometric cones work? Which is hotter cone 1 or cone 04? What do we bisque to-- cone 6, 06 or 04?
3. What is the difference between oxidation and reduction firing?
4. Is a pit firing oxidation or reduction?

Safety:
1. The greatest dangers of ceramics are? These can be avoided by?
2. When cleaning shelves it's a good idea to wear ________ and ________?
3. When firing raku, it's a good idea to wear?
4. When lighting a gas kiln, it's always a good idea to ________ and ________?
**TOOLS**

**Basic tool kit:** cutoff wire, needle tool, small sponge, 2 loop tools, 1 wood tool, metal rib, wood rib, bucket

As one acquires skills you will want to try new tools. There are many in the studio available for you to try.

**Processes**

There are only a finite number of ways of making ceramics. They are:

1. Pinch
2. Coil n Paddle
3. Slab
4. Wheel thrown
5. Extrude
6. Cast
7. Solid n scoop/sculpt

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<thead>
<tr>
<th>Clay</th>
<th>Surface Decoration</th>
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<tr>
<td>There are many kinds of clays. We are only using high fire clays. Cone 10. We sell 3 categories of clay: 1) Earthenware - $6.50/bag terracotta 2) Stoneware - $6.50/bag a) B-Mix—white, smooth good for throwing b) Buff—good for slabs, throwing, and sculpt. Better for Raku (grog) Darker than B-Mix 3) Porcelain - $7/bag very white, very smooth. A bit difficult to handle. 4) Recycle - $3/bag - 5 logs Not very plastic but its the softest, easiest for beginners to throw. Use the best one for the project. How do you know? Ask.</td>
<td>Carve, stamp, slip, paddle, scratch, Impress, glaze... Many, many ways Colored Slip: Paint, sponge, trowel, Mishima - inlaid, trail, stencil sgraffito - scratch through, wax resist</td>
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**Projects (just some ideas)**

**Solid - Totem (netsuke)**

**Pinch** - a bowl, an egg, a whistle smooth it, burnish it, carve it zoomorphic vessel

**Slab** - vase, box, lidded box, mug Slabs often go the fastest. It helps to draw a template first to work out the design. Slump molds are fast way to get shapes. Face jar/mug. Plate (platter-tude)

**Coil** - vase/olla, organic shape native american pot, story teller...

**Wheel** - wedging, centering bowl, cylinder, mug, plate

**Stages**

**Greenware - unfired**

1) Liquid (very wet) / Slip 2) Leather hard 3) Bone Dry - recyclable

**Fired**

1) Bisque ware - Can't be recycled 2) Vitrified - Cone 6 or 10 vitrified = stonelike

**Firing**

**Bisque**

1st) When clay is dry, it is ready to be fired. Because it is "greenware" it goes on the green shelves to be bisqued. This 1st firing goes to 1800deg (cone 04). It drives off all water, it transforms clay, can't be recycled. Although hard, it is also porous. This is when we glaze.

**Low Fire Glaze**

**Raku Firing**

**Pitfire/Sawdust**

Cone 6 - Electric or gas Cone 10 - Gas

**How do you know what temperature it is?** We use pyrometric cones that are made up of crushed minerals that are designed to melt at a certain temperature over a certain amount of time. Cones that have a "0" in front are low fire, they are high fire if they don't have a "0".

**Things I should know:**

Clay can be recycled (just add water) as long as it is not fired.

Gawillan is not bisque work. ALL WORK MUST BE BISQUED TO BE GLAZE FIRED.

Clay will dry out if it is not covered. So keep your bag closed during class, spritz it before leaving.

Light weight plastic is the best to cover pots -- dry cleaning bag, or painter sheet.

Plaster will explode when fired, do not mix them.

Clay that is well wedged and the right consistency for you will throw or work better than grabbing any old clay that has been sitting around.

Thin (up to 1/2" walls), even (not paper thin on one end and 2" on the other) work better. They won't warp so much, they'll dry more easily, and not explode so easily.

Cut off thrown pots as soon as possible, cut it off when you want it to dry. Drying attached destroys the bat and causes warping. With large wide pots cut off and flip over as soon as rim is dry.

When working with slabs put newspaper or plastic down so it can move around. If slab sticks to board it can cause cracking or warping.

Before glazing we sponge off the pot and wax the bottom. "Dry foot pots" means no glaze on bottom.