



Ceramics as an Armature

Efficient, Affordable and Simple

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Ceramics as an Armature:
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Clay

- ◆ Red Clay
 - ◆ Iron oxide
 - ◆ Elasticity
 - ◆ 1742 – 2030 °F
- ◆ Ball Clay
 - ◆ White or ivory
 - ◆ Soft, mixed, hard
 - ◆ Glazes
 - ◆ 1760 – 2372 °F
- ◆ Stoneware
 - ◆ Impermeable
 - ◆ Opaque and vitrified
 - ◆ White, beige, gray, ivory, brown
 - ◆ 2102 – 2372 °F
- ◆ Clays containing grog
 - ◆ Ochre tones
 - ◆ Texture
 - ◆ 2102 – 2372 °F
- ◆ Porcelain
 - ◆ Pure white
 - ◆ Can be translucent (1/8')
 - ◆ 2282 – 2372 °F soft
 - ◆ 2486 – 2660 °F hard

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How Shapes Are Made

- ◆ Hand-built
 - ◆ Thrown
 - ◆ Extruded
 - ◆ Ram Pressed
 - ◆ Slip Cast
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- ◆ Clay = weathered granite and feldspathic rock; a hydrated silicate of aluminum
 - ◆ Kaolin = purest primary clay (China Clay)

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Firing

- ◆ Biscuit (Bisque)
 - ◆ Moisture is driven off in the form of steam along with other organic compounds
 - ◆ Clay becomes converted to “pot”- a chemical change that is irreversible
 - ◆ 1562 – 1832 °F (can be higher)
 - ◆ Changes clay to ceramic
 - ◆ Raku 1472 °F
 - ◆ Earthenware 1832 – 2156 °F
 - ◆ Stoneware 2192 °F
 - ◆ Porcelain 2552 °F

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Decoration

- ◆ Metal oxides (very small percentages)
 - ◆ Copper
 - ◆ Nickel
 - ◆ Chrome
 - ◆ Cobalt
 - ◆ Iron
 - ◆ Copper carbonate
 - ◆ Cobalt carbonate
 - ◆ Iron chromate
 - ◆ Lead chromate
 - ◆ Manganese dioxide

- ◆ Ceramic pigments
 - ◆ Underglaze, overglaze, engobe
 - ◆ Water based
 - ◆ Can have frit (glaze)

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Ceramic Pigments

- ◆ Underglazes
 - ◆ Powder
 - ◆ Ready to use
 - ◆ Crayons/pencils
 - ◆ Oxides and pigments mixed with 10-15% transparent glazes
- ◆ Glaze
 - ◆ Glossy or matte
 - ◆ Aluminum oxide (stiffening agent) + flux (causes mixture to fuse) + color (metallic oxides, ceramic stains, raw materials)
 - ◆ Super-cooled liquid of glass like nature
- ◆ Engobes
 - ◆ prepared slip with some fluxing agent

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Applying Glaze

- ◆ Methods
 - ◆ Brush
 - ◆ Sponge
 - ◆ Splatter
 - ◆ Scrafitto
 - ◆ Dipping
 - ◆ Spraying
 - ◆ Majolica

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PMC and Ceramics

- ◆ Application to bisque Bead Blank™
 - ◆ 4-5 coats of PMC 3 Paste
 - ◆ Sand (800 grit)
 - ◆ Embellish with Sheet or Syringe PMC3
 - ◆ Fire (1650°F for 10 minutes)



Step 1



Step 2



Step 3



Step 4



Step 5



Step 6



Step 7



Step 8

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PMC and Ceramics

- ◆ Application to Glaze
 - ◆ Fire glaze first
 - ◆ Apply PMC3 and refire
 - ◆ Stilt



Step 1



Step 2



Step 3



Step 4

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PMC and Ceramics

- ◆ Additional Media Applications

- ◆ Enamel
- ◆ Polymer
- ◆ Keum boo
- ◆ Thermosetting plastics

- ◆ Finishing Techniques

- ◆ Tumbler
- ◆ Rotary
- ◆ Hand

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Questions?

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