

CERAMIC BASICS

What you really need to know to be a successful
ceramics artist

Part 2 of 2

CERAMIC BASICS IN NUTSHELL (REVIEWING)

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1. Clay Basics

Understanding what it is and how to describe it

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2. Importance of Water

Understanding the function of water in clay and how it changes throughout the process

3

3. Sculpting Techniques

Various ways to manipulate clay for different effects, both structurally and aesthetically

4

4. Baking Clay

Understanding the baking process, why it's important, and what to expect.

5

5. Decorating

There are many ways of adding designs; embellishing clay and ceramics.

Clay Sculpture Techniques

I think gentle and slow, when I am working with moist clay.

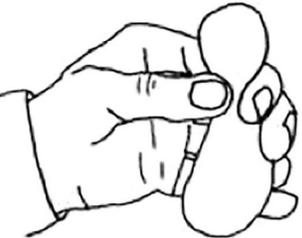
Remember, gentle and slow.



I can roll Balls of clay.



I can roll snakes with clay



I can squeeze the clay.



I can pull forms out of the clay.



I can carefully scratch designs into the clay.



I can gently smooth the clay to give it a finished look and feel.



I can subtract (take away) pieces of clay. I can use tools or my fingers.



I can add clay pieces to my sculpture by simply sticking them together and pressing firmly.

Which techniques can I use to sculpt the idea in my head?

3. SCULPTING CLAY

VARIOUS WAYS TO MANIPULATE CLAY FOR DIFFERENT EFFECTS, BOTH STRUCTURALLY AND AESTHETICALLY

GOOGLE THE UNDERLINED TERMS AND ADD "CERAMICS" TO THE SEARCH SO YOU YOU'RE MORE LIKELY TO GET THE CORRECT DEFINITIONS ;-)

- Techniques
 - Additive Sculpting
 - Subtractive Sculpting
 - Coil Building
 - Pinch Building
 - Slab Building
 - Carving
 - Sgraffito



BASIC CLAY TOOLS- USED FOR SCULPTING AND MANIPULATING CLAY

- They sometimes go by other names, but these are the most common.
- Note: Never use the needle tool or scraper for design work.
 - Why?
 - Its easy to carve lines too deep then your project is more likely to split/break/crack as it dries
 - Difficult to make lines clean and prominent enough for them to even show up after glazing process
 - It's the give-away to ceramic people you are a beginner and don't know any better ;-)
 - What to use instead:
 - Modeling tool (aka Potter's knife/thumb)
 - Gives a cleaner more distinct line.

4. BAKING CLAY

UNDERSTANDING THE BAKING
PROCESS, WHY IT'S IMPORTANT,
AND WHAT TO EXPECT.

- Firing= Baking in the ceramic's world
- Clay can be baked in a special oven called a kiln or in an open pit fire
- Vitrification is the point clay will start melting and fusing the crystals together.
- The temperatures in kilns/fires are measured 3 ways:
 1. Pyrometric Cones = glazes that melt at specific temperatures
 2. Pyrometers = thermometer's designed for high temperatures
 3. Color = the color of the glow objects in the fire/kiln correspond to specific temperatures.

PURPOSE FOR FIRING PROJECT

- Makes them durable and stable so they can be washed and cleaned– they can't go back to being clay anymore.
- Clay body shrinks as the water is removed. It can shrink up to as much as 20%! The cups below were all the same size.
 - Shrinking really matters for when you are applying glazes because the surface area changes so dramatically between greenware and glaze firing. We'll take more about this with glazing later ;-)



DECORATING TECHNIQUES

WE WON'T BE DOING ALL OF THESE HOWEVER IT'S GOOD TO KNOW WHAT THEY ARE ;-)

GOOGLE THE DEFINITIONS OF THE ONES UNDERLINED (ADD "CERAMICS" TO THE SEARCH TO MAKE SURE YOU GET THE CORRECT ONES)

EXTRA CREDIT FOR LOOKING UP ALL OF THEM ;-)

• Before Firing

- Clay manipulation
 - Carving
 - Sculpting
- Engobes
- Slip Trailing
- Sgraffito
- Clear Coat Seal (if not firing project at all)



• After Bisque Firing

- Under-glazing
- Oxide and Mason Stains
- Overglazing
- Paint (if not firing again)
- Wax Resist



• After Glaze Firing

- Re-glazing
- Wasabi
- Using what you've made for other decorating
 - Tile Mural
 - Mosaics
 - Applying fittings and other trimmings (like for a birdbath, or a lam



GLAZING

THERE ARE MANY WAYS OF
ADDING DESIGNS AND
EMBELLISHING CLAY AND
CERAMICS.

The important differences between glazes and clays

- Glaze has more silica and flux than clay = more glass like
- Has more impurities to increase the range of colors

The Purposes for Glazing

- Decoration
- Helps protect the by creating a harder protective surface.
- Creates a clean smooth surface for cleaning (important for functional ware like plates, cups, bowls)



GLAZING: WHY AND HOW

- Glaze is NOT paint- paint will burn off in the kiln; a glaze is made up of minerals that undergoes a major chemical reaction at high temperatures and creates a variety of colors and turns into glass!.
- The important differences between glazes and clays
 - Glaze has more silica and flux than clay = more glass like
 - Has more impurities to increase the range of colors
- The Purposes for Glazing
 - Decoration
 - Helps protect the by creating a harder protective surface.
 - Creates a clean smooth surface for cleaning (important for functional ware like plates, cups, bowls)
- Glazing Application Techniques
 - Antiquing
 - good for enhancing texture
 - Paint or dip project then wipe of glaze from raised surface
 - Painting
 - using paint brushes to deposit glaze
 - Good for more precise application of glaze
 - Overload brush with glaze, wipe on surface, let dry, then repeat.
 - Don't try to go over an area with more than one pass before it dries
 - Dipping
 - Submerging piece in glaze

HOW TO GLAZE A CERAMIC PIECE

Clean

Clean Piece :

- get rid of any dust, ash, ceramic crumbs, etc. Just need to wipe surface with a sponge.

Mix

Mix glaze:

- mix till all sediments are evenly distributed/suspended in water.
- Hand is really the best tool, but potter's thumb works well for smaller containers- all glazes we use are non toxic- just make sure you wash hands with soap before eating anything.
- Should be the consistency of thick milk (ask for help if it isn't)

Apply

Apply to thickness of a credit card

- Dip= hold under surface for 2 full seconds
- Painting = 2-3 thick even coats
- Antiquing can be done by it's self or under the other 2 application techniques.

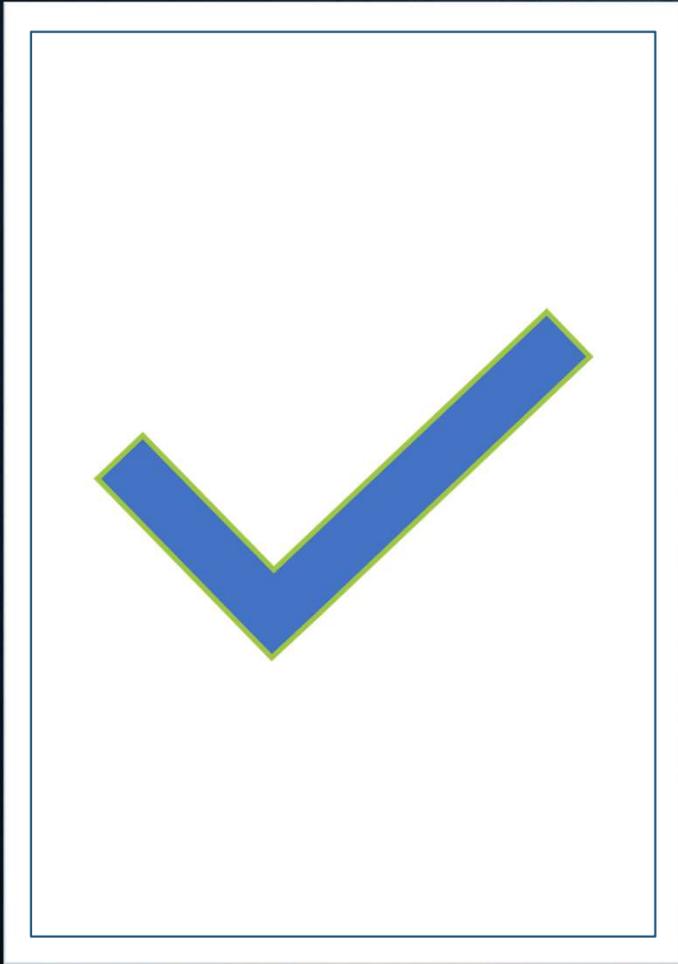
Wipe

Wipe Foot

- Clean any surface that will touch the kiln shelf and a $\frac{1}{4}$ inch up from it
- Press project on a damp clean sponge and twist back and forth a few times.
- If you skip this step your project won't get fired until it's fixed because it will ruin the kiln

A QUICK RECAP OF THE MOST IMPORTANT STUFF TO KNOW...

- What are ceramics?
 - It is a medium of art that is also one of the oldest known as well. Mined minerals mixed with water make clay which can be sculpted and formed into objects that can be fired to permanently keep its shape. The objects made were traditionally made for utilitarian purposes but can also be made for purely aesthetic purposes as well. Many contemporary artists like to experiment with the form and function ceramics has to offer.
- What is clay really and why is it important to know?
 - Clay is decomposed Granite (an igneous rock). Knowing the chemical properties of clay can help inform what other chemicals you may want to add to it to change its properties like: what color it is, what temperature it melts at, and the level of detail it can hold.
- What traditional process does clay go through to become a finished art piece?
 - Mined mineral → slip → plastic → leather-hard → bone-dry/Greenware → Bisqueware → Glazeware
- Why is understanding water management important?
 - Artists need to understand how water content affects the shrinking of clay so the project will be more likely to turn out the way the artist intended.
 - It also helps the artist know what to plan for— for example some details are easier to add when clay is more plastic and others when it's leather hard.
 - Artists need to know at what stages clay can and can't be recycled to more responsibly manage their supplies.
- What are the techniques there to manipulate clay?
 - Additive, Subtractive, Coil building, Slab building, Pinch-Pot, Pour-Molds, and slipping-scoring are the most common ways to manipulate clay and it is common to use a variety of techniques even if one technique dominates most of the process.
 - Practice and experience will help artists gain a better understanding of which techniques are more effective or efficient for specific tasks.



**SO THERE'S THE
THE BASICS.**

**IT'S NOT
EVERYTHING BUT
IT'S A GOOD
START**

