



## Beginners Questions

# FAQ

School Name:  
Teachers Name:  
Ceramics and Pottery I  
Grades 6 - 12  
[Dates]

- Part 1 – Clay
- Part 2 – Process
- Part 3 – Glazing
- Part 4 – Firing

### PART 1 – CLAY

#### What type of clay should I buy for my classroom?

White Earthenware. Clay is sold in different colors: white, brown, and red. There are four different types of firing ranges: earthenware, raku, stoneware, and porcelain. White Earthenware is most commonly used in the classroom. It is usually gray to beige in color when moist, and fires white at cone 05 - 2. White earthenware works well with all low-fire glazes. Glazing over a white clay surface (rather than a red or brown clay) will make the colors brighter and more vivid.

#### How much clay should I buy?

It is difficult to determine exactly how much clay to purchase for your classroom. One way to think about it is that one pound of clay is about the size of one orange. A small project like a pinch pot might require a pound of clay. A 25 lb. bag of clay could yield 25 small projects. If the projects are larger and you want to be more exact, build an example of the project and weigh it while it is still damp. You may want to add 10 to 20 percent more clay just to make sure you have enough clay.

#### Does clay have a shelf life?

As long as clay is wrapped well in plastic and remains moist, it can be used at any time.

#### My clay has gotten too hard, what should I do?

Unfired clay can always be recycled. Link to our video presentation to learn how. [Insert Video link.](#)

#### I have some unmarked clay in my classroom. How do I know what firing temperature to use.

If you're sure it's clay, try firing at low (earthenware) temperature cone 05-06. Be sure to test fire first before using it for student work. High-fire clay can be fired low but low-fire clays CANNOT BE FIRED HIGH or the clay will melt in your kiln.

#### Does paper stuck to clay need to be removed before firing?

Try to remove as much paper as possible. A very small amount should be fine but remember that paper will produce smoke when burned in a kiln.

#### What is grog and do I need it in my clay?

Grog is a sandy, gritty material that is added to clay when building sculpture or firing Raku. It is not needed for general construction techniques in the classroom.



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## PART 2 – PROCESS

**For best results, the entire work should dry at the same rate.**

If thick and thin parts are attached together, cracks will form as thinner areas shrink faster than thicker areas. To avoid cracks, cover ~~the~~ thinner areas with plastic to slow the drying process. Leave ~~the~~ thicker areas uncovered. You may cover the entire work with plastic to slow down the drying process. Some potters paint wax on the thinner areas but that does create an odor when firing in the kiln.

**Why do some people use vinegar when joining clay?**

Since vinegar is a mild acid it can be used on slab pots to join the slabs securely. Vinegar will soften the stiff clay slab on the edges where it attaches.

**Do I need to add vinegar to slip?**

In the classroom, vinegar does not need to be added to slip as students usually work with moist clay. While working on slab pots, vinegar is an option.

**How can students make slip for joining clay together?**

Let pieces of clay dry COMPLETELY. Place the dry clay into a container and cover with water. Let the mixture set for a few minutes, then stir and it will become a smooth slip. Add water as necessary.

**Do students always need to score clay?**

Always score clay. Once pieces are pressed together give them a slight wiggle until they don't slide and are well-attached. Smooth the parts together with a wooden modeling tool or popsicle stick to ensure they won't come apart later.

**Why does clay stick to some surfaces and not others?**

Clay sticks to any nonporous surface (glass, glaze, formica). Clay won't stick to other surfaces like wood or canvas.

**What is the best way to store student projects?**

If student work needs to dry, leave it uncovered. If it needs to stay moist, wrap the project in plastic. Dry cleaning plastic is best because it is thin and can be wrapped close to the surface. Some teachers use plastic bins for project storage. Adding a moist sponge to an airtight bin can keep the inside environment moist.



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PART 3 – GLAZING	<p><b><u>After a glaze firing why does the glaze appear matte or have bubbles on the surface?</u></b></p> <p>Glazes bubble and then subside by the end of the firing. If there are bubbles on the surface or if the glaze looks matte, check your kiln to see if you have a burned out element</p>
	<p><b><u>Why do commercial glaze manufacturers suggest applying three coats?</u></b></p> <p>Applying three coats of glaze will ensure that all parts are covered evenly. Apply the glaze vertically, horizontally, and then diagonally to avoid brush strokes showing on the final product.</p>
	<p><b><u>What is underglaze?</u></b></p> <p>Underglaze is painted on a clay project under the glaze before glaze is applied. Underglaze is not a glaze at all but is a clay-based colorant. It acts as a veneer of clay color on the surface. It is usually applied on pottery before-firing although AMACO Velvet underglazes can be applied on bisqueware as well. Clear glaze is applied over the underglaze to bring out the intensity of the color and make it shiny.</p>
	<p><b><u>What if glazes in the jar are too thick or dried out?</u></b></p> <p>Mix a little AMACO Susendaids with water. Add this mixture to the glaze until it is a brushing consistency. If it is difficult to mix in the jar, empty the jar into a bowl, add the Susendaids and mix with an electric mixer or blender. Adding just water will thin a glaze and cause it to settle at the bottom of the jar.</p>
	<p><b><u>If Underglaze is applied to the bottom of a pot, will it stick to the kiln shelf?</u></b></p> <p>Underglaze will not stick to a kiln shelf during firing because it is a clay-based color and not a glaze.</p>
	<p><b><u>Why is it preferable to bisque fire at 04 and glaze fire at 05?</u></b></p> <p>Most glaze manufacturers suggest a slightly higher temperature for bisque firing than for glaze firing to ensure that the glaze won't craze or cause small hairline cracks.</p>
PART 4 – FIRING	<p><b><u>How long does it take to fire a kiln?</u></b></p> <p>Kilns usually take approximately 7 to 10 hours to fire, depending on how fast or slow the firing, and if a preheat is added.</p>
	<p><b><u>Do I need to preheat the kiln?</u></b></p> <p>If the pottery is thoroughly dry the kiln doesn't need to be preheated. Sometimes preheating is suggested if the work is unusually thick.</p>
	<p><b><u>How do I know when work is ready to fire.</u></b></p> <p>If the project feels cool to the touch it isn't ready to fire. Some potters hold the work against their cheek to feel if it is cool or not. A fan in your kiln room will help dry the work before firing.</p>



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PART 4 – FIRING – continued

**Why do projects break in the kiln?**

There are only two reasons work breaks or explodes in the kiln: trapped water or trapped air. If the work is not thoroughly dry, the water trapped inside the clay turns to steam and expands as the work contracts, causing it to break. If air is trapped in a project, a small pin hole is usually enough to relieve the pressure.

**How do I apply kiln wash?**

Dry kiln wash is mixed with water until it is the consistency of heavy cream. The kiln wash can be painted on with a large brush or applied with a paint roller. Avoid painting kiln wash on the sides or bottom of your shelf, as it may flake off and stick to glaze-ware during firing.

**How often do I apply kiln wash?**

Apply kiln wash as needed. In a well-ventilated area and wearing a mask, scrape the old kiln wash off with a putty knife. All of the kiln wash does not need to be removed. Apply a fresh coat of kiln wash, being careful not to get any on the bottom or sides of the kiln shelf.

**Why vacuum a kiln?**

Sometimes when projects break in the kiln small shards can end up between the coils. These need to be removed so coils will not burn out. Never vacuum your kiln when it is plugged in.

**How fast can I fire my kiln?**

Never fire fast when firing bisque. Sometimes people fire faster for a glaze firing. Make sure that the work is relatively thin, previously bisqued, and the applied glaze is COMPLETELY dry.

**Can pottery touch or be stacked in a kiln?**

Pottery pieces in a bisque firing can be stacked or touching without a problem. Projects in a glaze firing cannot be stacked and should be a finger-width apart.

**When can I unload a kiln?**

Let the kiln cool completely so the ware is not hot to the touch.

**Can pottery be fired in an oven?**

No. Ovens do not get hot enough for quartz inversion which is what turns clay into ceramic material.

**Can I place clay on a kiln to dry?**

Do not place projects on top of a kiln because the projects will dry too fast and you run the risk of cracking the kiln lid.