



Create with Clay

20 Clay Projects by Jenni Ward, Ceramic Artist





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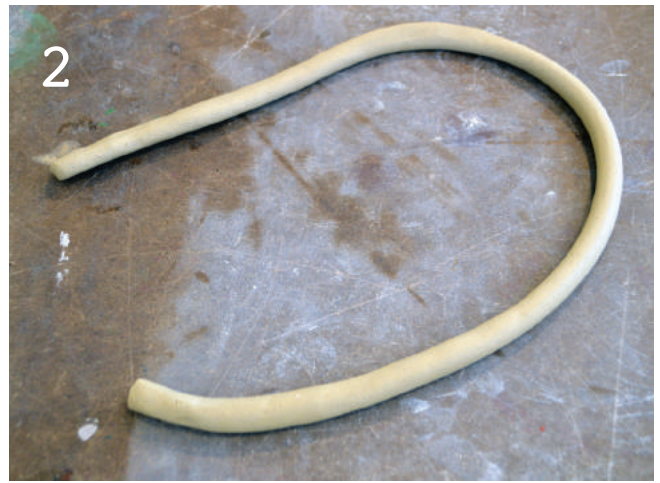


Texture Turtle

*Practice your coil making
while creating this fun creature.*



1. Start with a piece of clay about the size of a plum.



2. Break off a piece of it and roll out a long snake or coil of clay, about 15 inches long and about as thick as a pencil. Try to keep the coil as even in thickness as possible.



3. Scratch the entire length of the coil and then wrap it up into a spiral shape blending in the end piece. You can smooth out the spiral design or leave it there, this piece will be the turtle shell.



4. Next roll out another snake of clay the same thickness but only about 8 inches long.



5. Cut this snake of clay up into 6 pieces; 4 for the legs, 1 for the head and 1 for the tail. You can shape them with your hands as needed.



6. Scratch the ends of each of your pieces and the belly of the turtle shell and attach them on.



7. Make sure to overlap the pieces when you attach them on to have a larger surface area of attaching, so don't attach them edge to edge, they'll be more likely to break off when you move them in and out of the kiln.



8. You can now add on a face to your turtle and start to decorate the back of the shell with a pattern using tools. Let your finished turtle dry before you bisque fire them and they are ready to glaze and fire again.



Ice Cream Bowl

This heart-shaped bowl is a fun variation of a simple pinch pot.



1. Cut off a piece of clay that is about as big as a baseball.



2. Shape it into a sphere by hitting it with curved hands until all flat sides and points are rounded.



3. Push your thumb into the sphere (be careful not to go all the way through).



4. Start to squeeze the clay with your thumb on the inside and your fingers on the outside. Squeeze and turn so the hole that you made with your thumb is stretched out and starts to form a bowl. This is called making a pinch pot because you are pinching your clay into the shape of a pot/bowl. Keep squeezing and stretching the clay until it is the size that you want your bowl to be. Hint: If you stretch and squeeze it too much, your clay will become thin and fragile, try to keep it about as thick as a pancake.



5. Now you can change the shape of your bowl if you'd like. It can be anything; oval, square, triangle.... I'm going with a heart shape for this bowl. Hint: You can also use a spray bottle to keep your clay damp – don't overdo it though, your clay will become mush!



6. You can also use this time to smooth out any cracks or rough areas of clay – your fingers are a great tool for this! Now it's time to consider decorations for your bowl. You can use your clay tools to add design, pattern and texture to your pieces. Experiment with different ideas, if you don't like them, you can always smooth them out and try something different.



7. Sometimes finding tools that are not really for clay; such as a comb, can create a really effective design. I like to create the majority of my design and texture on the outside of the piece, this helps keep the bowl easy to clean, especially if it's going to be used for food.



8. Let your finished bowl dry before you bisque fire it, glaze and fire again.



Textured Box

These sweet and simple boxes are a great way to introduce texture to young artists.



1. Start by rolling out a flat piece of clay that is about 3/8" thick (or about as thick as a pancake).



2. Make sure that the surface is smooth.



3. Choose your textured rubbing plate and lay it on top starting at one end of your clay. Using a rolling pin, roll over the texture plate pushing down evenly as you go.



4. If your clay is larger than your rubbing plate, you'll need to lay the rubbing plate down again in the blank clay area and roll in the texture again until the entire piece of clay is covered with your texture.



5. You can peel up one corner to check if you have pushed hard enough, if not roll some more, if it looks good peel up the rubbing plate.



6. Cut out one square of clay about 3" - 4", paper templates can be helpful.



7. Once you have one square cut out, lay it down on top of the clay in a new area and trace the first square so that the second one is exactly the same size.



8. Continue doing this until you have six squares. If you run out of room on your clay to continue cutting out squares, squish all the small scrap pieces together, roll it out flat again and put the texture in again.



9. Now it's time to assemble the box. Pick one square that will be the lid and put it to the side.



10. Pick the square that will be the bottom and use a scratching tool to scratch all the edges, then scratch 3 sides of the remaining 4 squares.



11. Now that everything is scratched, pick the first wall and attach it to the bottom of the box, it may be a little wobbly at first.



12. Attach the second wall to the bottom square and then squeeze the corners together, being careful to not smooth out your textures.



13. Attach the third wall.



14. And finally, attach the fourth wall.



15. Using your extra clay, create a knob for the lid and scratch-to-attach it on top. You can also cut out a smaller square and attach it to the bottom of your lid so that it won't slide off the box.



16. Let your finished box dry.



17. Bisque fire your box, glaze and fire again.



Hand Bowl

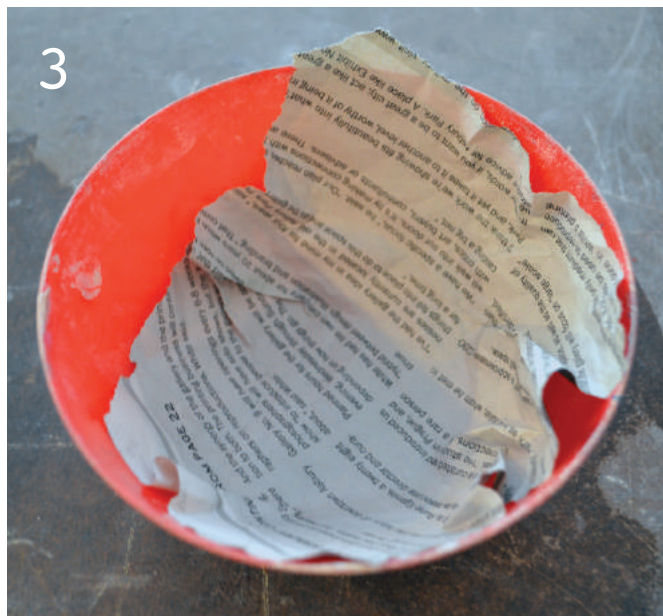
Hand bowls are a fun and easy way for students to work with slabs.



1. Roll out a large slab of clay that is about 3/8" thick and have students trace their hand 2-4 times. This may vary due to the size of the bowls you are using, and the size of the students hands.

HINT: You can add texture to your clay at this point if you want or keep the clay smooth.

2. Cut out the hands and smooth out the edges.



3. Line a bowl with paper to keep the clay from sticking to it.



4. Lay the first hand into the bowl, letting the fingers rest on the edges, then scratch the bottom of the hand. Lay the next hand in the bowl scratching-to-attach where it overlaps with the first hand and adjusting the fingers position as desired. Continue with the rest of the hands until the bowl is formed.

5. You can add the student's name and age in the bottom of the hand bowl if desired with rubber ABC stamps. Let your finished bowl dry before you bisque fire it, glaze and fire again.



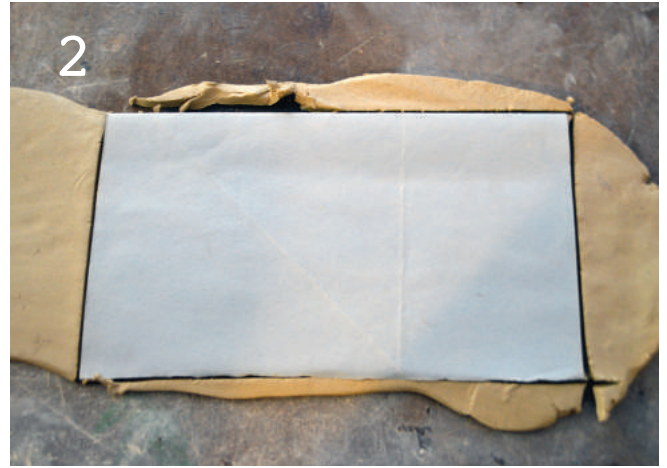


Patterned Pencil Holder

*These slab-built pencil holders are easy
for any age and make great gifts*



1. Start by rolling out a slab of clay that is about 3/8" thick and about 5" wide by 9" long.



2. You can give students a rectangular paper template to help them cut out the right size.



3. Determining the size is a great opportunity to talk about the functional aspects of our pencil holders – too short or wide and the pencils will fall out, too tall and you won't be able to reach them. I have students test their pieces with a pencil and if they don't pass the "pencil test", they need to rethink the size or shape of their pieces.



4. Wrap the rectangle into a cylinder and scratch-to-attach the edges together. Be sure to blend the seam well using your finger, you will need to support your clay from the inside while you do this.



5. Use your extra clay or roll out another slab of clay (same thickness) so you can trace the cylinder to make the bottom.



6. If you trace the cylinder, you know that it will fit exactly onto the bottom. Trim around the outside edge.



7. Scratch-to-attach the bottom of the cylinder and the edge of the circle you've cut out.



8. I like to flip my whole cylinder over to attach on the bottom and blend in the edges. You can also reach inside the cylinder with one hand and use the other on the outside to blend the two pieces together.



7. Now you're ready to create your patterns! I give students a lot of examples of patterns they could use on their pieces and I also encourage them to experiment with the clay tools, sometimes using the back of a tool will create an interesting shape in the clay. Also using other objects such as pen caps, beads or natural materials will create an interesting marks too.



8. Encourage students to cover the surface of their clay in at least 5 different patterns. Let your finished pencil holder dry before you bisque fire them and they are ready to glaze and fire again.

Create with Clay: THE BASICS

Where do you get ceramic supplies?

- Your local ceramic supply store will be your best bet. They will have everything you need and are much cheaper than art supply stores that don't specialize in clay, plus they can answer all your clay questions.
- Many ceramic artists will mix up their own clay and glazes so there are lots of bags of powders and chemicals for sale at ceramic supply stores, don't be intimidated; clay and glazes come premixed in consistent, affordable, and understandable packaging too, but it helps to know what you want.

What if I don't have a kiln?

- A lot of ceramic supply stores will fire your work for you, the price is usually based on how much room it takes up in the kiln and what temperature you are firing to. So if you don't have a kiln, you can still create with clay in your classroom!

What kind of tools do I need?

I believe that there are so many similarities between cooking and working with clay. The tools seem interchangeable between the two, so take a look at some of the extra kitchen items you might have or pick some up at a yard sale. Over time you can add to your collection of tools but in the beginning, a few basics will do. My basic tool list:

- A knife for cutting
- A fork for scratching
- A skewer, pencil or sharpened chopstick
- A plastic or metal scraper (credit cards work!)
- A sponge
- Texture tools (shells, stamps, pinecones etc...)



About Clay:

- Clay comes in all different colors and textures, but more importantly they come in different temperature ranges, usually labeled as low fire, medium fire or high fire. The basics of choosing a clay body are temperature range, texture, plasticity and color. Your ceramic supply store will help you find the best clay for your classroom.
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- When you pick a clay to use you need to know its properties, meaning that you need to know if it is good to hand build with or if it is better used as a wheel throwing clay body, this will be determined by the plasticity of the clay and the amount of grog or sand that is added to the clay. If you are wheel throwing you want a clay body that is smooth to the touch and has plasticity, when you chose a clay body for hand building you want to have a bit of grit to it so that it holds up the structure you are building.
- The color of your clay is a factor because when you glaze dark clay it will darken your glazes and possibly make them muddy looking while light colored clay will keep your glazes holding their true color. The color of the clay when it is wet may change after it has been fired.
- Premixed clay comes bagged in 25lb bags, I usually budget .5 - 1lb per student per project.
- Clay will never go bad if kept wrapped tightly in its plastic bag. If it does get dried out to the point of not being workable, it can be reclaimed with water. If you add enough water to it and let it sit in a bucket or the same bag it will soak up the water and will probably be too mushy. At that point you can lay it out in an even layer on a board and let it dry to the right working consistency again, you have to watch it, but you can use clay over and over again in this way. If you recycle your dry bits of clay to a working consistency, you will need to wedge (similar to kneading bread) your clay to get out any air bubbles that have been trapped in the clay. Once it is fired, you cannot reuse it to build with.
- Clay that is almost dry but still slightly workable is called leather hard clay. When it is completely dry but not fired yet, it is called bone dry. When it has been fired once the clay is now ceramic and it is called bisque or bisque ware. When it has been fired again with glaze it is called glaze ware.

Building Basics:

There are a few basic rules that you need to follow with clay to have success with even the simplest project.

- Clay can explode when you fire it, if it is not built properly. If you have an air pocket in the clay that was created during the building stage, the air pocket explodes because when the water in the clay is heated in the kiln, it turns to steam and if the steam can't get out, it blows itself out. This can also happen if the clay is too thick. Anything that is built big must be hollow in the center and that hollow space needs an air hole to allow the steam to escape. I try to keep the thickness of the clay to ½" or less to be safe.
- All parts that are connected together need to be scored on both sides before attaching. This technique is typically called scoring and slipping, to help my students remember this important step, I call it "scratch-to-attach". If you skip this step, all of the parts you've added on will fall off when the clay dries.

Bisque Firing:

- There are two different firings that you need to do to finish your clay art, the first one is the bisque firing. The work must be completely dry before it goes into the bisque firing.

- The bisque firing turns your clay into ceramic by taking all the water out of the clay and starts to vitrify or close up the clay body so that it is not as porous. I usually bisque fire to a temperature referred to as Δ06 (called cone oh six in ceramic lingo). In this firing, you want to heat the kiln up slowly because if the temperature goes up too fast the artwork can explode.
- The clay can also explode if the clay goes through thermal expansion and contraction process too fast, just like a glass container going from the refrigerator to the hot oven, it will break. So when firing the kiln it needs to be turned up slowly and cooled down slowly to take care of the ware.
- When you are loading a bisque firing, the pieces can touch each other so you can carefully pile pieces inside or on top of other ones and fit as much as possible into the kiln. After the pieces have been bisque fired they are ready to be glazed.

About Glazes:

- Glazes also have different temperature ranges and they need to match your clay body temperature. If you have a low fire clay, then you need a low fire glaze.
- When using glazes with children it is important to check that the glazes are food and drink safe, which means that there is no lead or other toxic ingredients in the glaze.
- Glazes also come with different surfaces such as glossy, matt or satin. The store where you buy them usually has a sample of what the glaze looks like after it has been fired to help you choose the color and surface you want.
- If you can it is always good to create sample tags for students that can hang on the outside of each jar so that you always know what the glaze looks like once it's fired. Many glazes change color quite a bit during the firing process.
- When you are glazing onto your bisque ware you want to be careful to not contaminate your colors by using the same brush.
- When you paint on the glaze it will go on liquid and dry rather fast to a powdery pastel surface, once each layer has dried you can put on other colors or layers. The more layers you use the richer the color is but you generally don't need more than three.
- When your glazed pieces go into the kiln and are fired, they will become liquid as they heat up and then turn to a solid hard surface when they cool. So glaze cannot go onto the bottom of the artwork or whatever surfaces touch the shelf it is sitting on, otherwise when the glaze cools it will get stuck to the shelf. I tell the students to not glaze the bottom of their pieces and if a little drips onto the bottom that it can be wiped off with a wet sponge.



- Before I load any glazed pieces into the kiln I check them all and wipe down the bottoms, you can end up with a real mess if one slips through. It will damage the artwork when you get it off the shelf as well as the shelf. When you are loading glazed pieces they cannot touch each other for the same reasons, two pieces will easily bond together with glaze. Once your pieces are glazed they are ready to go into the final glaze firing.

Glaze Firing:

- The glaze firing is done to fuse the glazes to the clay.
- This firing will go to the temperature required to bring the glazes to their maturity which will be on the label of the jar and should also match the temperature of your clay.
- When the pieces are loaded they should have clean bottoms to keep them from sticking to the kiln shelves and they cannot touch each other or the sides of the kiln. This is really really really important!
- The kiln will need to be programmed for the cone temperature that you are going to and can be run slightly faster than you ran the bisque firing since if a piece makes it through the bisque it will not explode in the glaze firing.
- Allow the kiln to cool slowly once it has finished firing. If it cools too quickly the glazes will go through thermal shock and can flake off the clay.
- Once the kiln and the artwork have cooled they are finished and ready to use or display.

About Kilns:

- Kilns vary greatly depending on the brand and type, the biggest difference is what fuel they run on; kilns can be electric, gas or wood. Most schools have electric kilns because they are compact, safe and often have computerized firing cycles.
- To use an electric kiln you would start by stacking your ware on the bottom shelf, use posts to hold up the next set of shelves to build a second layer and so on until the kiln is full. Pick the appropriate computer program on the kiln (see your user manual) to run your firing, usually slow for a bisque firing and med for a glaze firing.
- When your kiln is done firing it will take hours to cool off. Don't open the kiln too early or too fast so the work can cool off slowly.



HAVE FUN & B CR8IV!



CREATE WITH CLAY 2

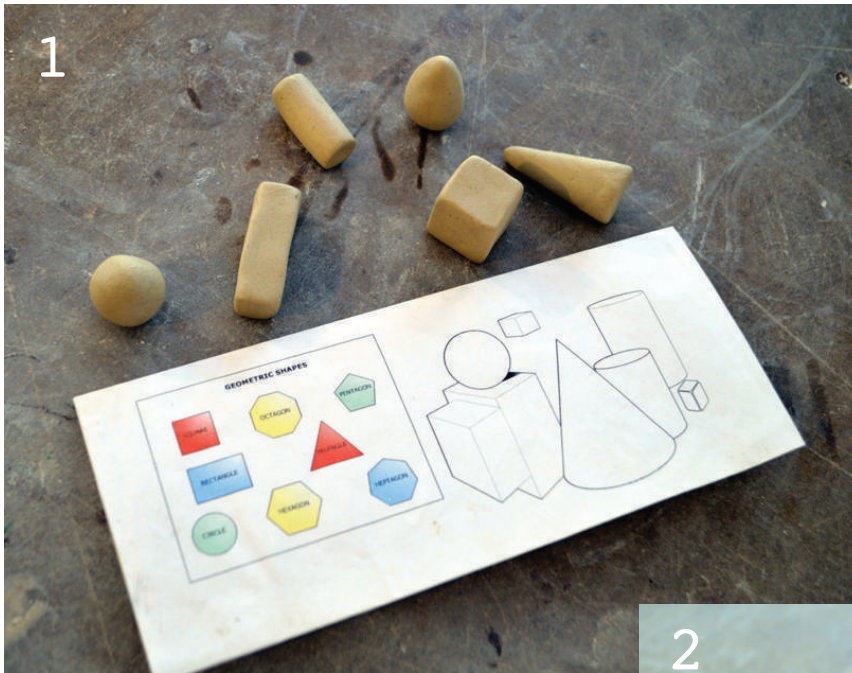
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3D Shape People

*A great way practice making shapes
while making fun little people*



1. To begin this project I have students identify the names of basic 3-D shapes (sphere, cylinder, cube, pyramid, cone, rectangular prism and egg). Students get a small piece of clay to practice making all of these shapes using only their fingers and the flat surface of the table. Discuss how we can attach them together to create a person. For example: a cone for a body, an egg for a head, cylinders for arms or legs, a cube to sit on to help them balance, etc.



2. Give students more clay and allow them to make larger 3-D shapes and multiples of the shapes to start to build their sculpture. Remember that all of the shapes need to be scratch-to-attached together or they will fall apart when the clay dries.



3. Students may also add details and textures to their sculptures using tools. Challenge students to keep adding on parts or make multiple characters using only these basic shapes. Dry them completely, bisque fire, glaze and glaze fire.



Pinch Pot Monster

*All kinds of creative creatures are possible,
if you add a body to a simple pinch pot*



1. Take one piece of clay about the size of a small orange.



2. Roll the clay into a sphere.



3. Push your thumb into the sphere and squeeze around the sides to create a pinch pot.



4. This pinch pot becomes the mouth of your monster.



5. Shape the mouth to be positioned to show an emotion.



6. Now it's time to add on your monster's parts. I've created three spheres for eyes.



7. Don't forget to use a scoring tool to scratch-to-attach all of your parts on.



8. You can use a tool to add details like pupils for the eyes.



9. I rolled out a coil of clay and then flattened it to create a tongue.



10. The tail is made by rolling out a coil of clay so that it is thinner at one end than the other. Scratch to attach the thicker end and blend it into the body shape when you attach it. This will be fragile so make sure that it is securely attached before you start moving.



11. Arms, feet, teeth and any other features you can think of can all be shaped with extra clay and added on by scratching-to-attach.



12. You can also add texture to the body of your monster using tools. This one has polka dots added onto it with glaze. Dry them completely, bisque fire, glaze and glaze fire.



Mugs with Mugs

*Start your day with a smile
and a mug that looks back at you!*



1. Start with a handful of clay about this size.



2. Roll out the clay until it is about 10" x 5" long and about 3/8" thick.



3. You can give students a template for cutting out the basic rectangle or let them decide on the size. For this smaller mug, I cut out a rectangle that is about 9" x 4".



4. Cut the rectangle out with a sharp tool.



5. The short edges of the rectangle need to be scratched and then wrapped up into a cylinder.



6. Blend the edges together.



7. Place the cylinder on top of the slab of clay and using a pointed tool or a knife, trace around the perimeter of the cylinder to get the exact size needed for the mug.



8. Scratch-to-attach both pieces. It's easier to do this when the mug is upside down or if you put one hand on the inside and connect it with the other hand on the outside.



9. Your basic cup shape is created, which could be used for a variety of projects. HINT: Make sure that you don't leave any holes when you're attaching the parts of the cylinder together--your hot chocolate will leak out!!



10. Using the extra clay that you have, roll out a long rectangle.



11. Cut out a long thin rectangle, about 1" wide by 4" long to make the handle.



12. Fold the top of the rectangle over so that from the side it looks like half of a heart shape. Scratch-to-attach the top and bottom of the heart shape and the top and bottom of your mug.



13. Press the handle on using your fingers on the inside and outside of your mug making sure it's secure. (Don't pick it up by the handle until it's fired!!)



14. Your mug is complete and you're ready to decorate it with the faces.



15. Cut out circles from my extra clay and using clay tools and some examples of different emotions.



16. Challenge yourself to come up with 6 different emotions using just dots and lines.



17. Scratch-to-attach circles onto the mug. Consider putting a face on the inside bottom of your mug so that when you drink, you get a surprise face!



18. Dry mugs completely, bisque fire, glaze and glaze fire.



Fishie

Connect two pinch pots and add some details to make this cute fish



1. Cut off a piece of clay that is about as big as a baseball.



2. Cut it into two equal pieces and make them each into spheres by rolling them in your hands.



3. Push your thumb into each sphere and start to squeeze around the side to create a small pinch pot.



4. Repeat with the remaining sphere.



5. Using a scratching tool, scratch-to-attach the edges of both pinch pots so they will stay connected together. Anytime two pieces of clay need to be attached together, I use the scratch-to-attach techniques.



6. Gently press both halves together and blend the seam until the shape is smooth. Be careful not to dent in the sphere as you smooth.



7. Shape the sphere to be more egg shaped for the body of your fish but make sure that you are keeping a hollow space inside the clay. If it is squeezed to the point where it's a solid piece of clay, it can explode in the kiln. HINT: You can use steps 1-6 to use as a base for building a lot of projects.



8. Now you are ready to start adding on your fish parts. Give each student an extra piece of clay to use for all of their extra parts. Start with the tail rolling out a hot dog shape of clay and bend it into a crescent moon shape.



9. Scratch-to-attach the tail on to one end of the body. Blend it into the body using your fingers and squeeze the tail thinner by pinching it and shaping it.



10. Blend the tail into the body using your fingers and squeeze the tail thinner by pinching it and shaping it.



11. Add on two large spheres for bulging eyes.



12. Use a tool (or the back of a tool) to push in a pupil.



13. You can use a knife to cut the mouth open or just draw a mouth on, squeezing the cheeks gently will make the mouth open wider.



14. To add the dorsal fin, roll out a small hotdog shape and scratch-to-attach it on to the back of your fish.



15. Squeeze the dorsal fin and shape it to be a little wavy with your fingers.



16. To make the side fins, start with a hot dog shape, flatten it gently and cut it in half with a knife.



17. Scratch-to-attach one on each side of your fish.



18. You also have the choice of abstracting your fish by adding on other parts, like a hat, skateboard or making it hold something in its fins. Some of my students have made their fish wearing jetpacks, skiing or wearing a tutu!



19. Make sure that you poke a hole into the hollow space of your fish so it doesn't explode in the kiln. I usually hide the hole on the belly of the fish or make it part of the design like cutting the mouth open.



20. Let your finished fish dry before you bisque fire, glaze and fire again.



Textured Picture Frame

Just add your photo for a great handmade gift!



1. Start with a slab of clay.



2. Use a rolling pin to flatten the clay to about 3/8" thick (about as thick as a pancake) and a little larger than you'd like your picture frame to be.



3. Add texture to the clay slab. You can use found objects such as leaves, buttons or shells.



4. Rubber stamps work great in clay and ABC stamps can help personalize a frame. This frame was textured with a pine cone, eucalyptus nuts and rubber stamps.



5. Cut out the outside shape of your picture frame, this one is about 5" square.



6. Cut the hole where your picture will show through, be careful not to cut too close to the outside edge, you want to keep at least an inch of thickness all the way around your frame.



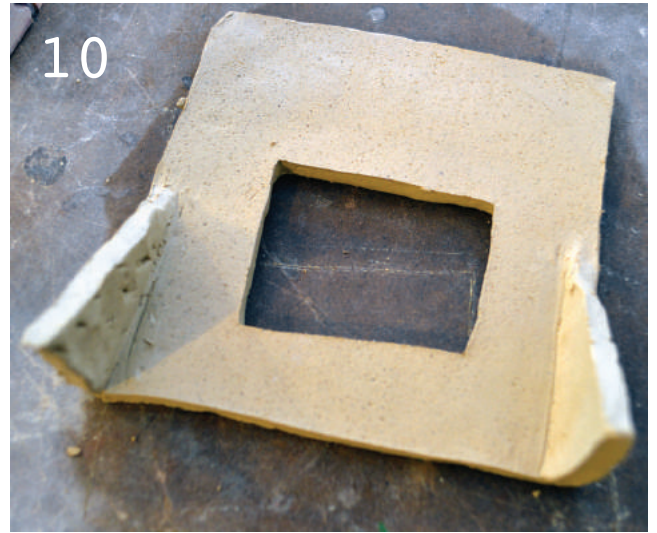
7. Save the inside square that you've cut out.



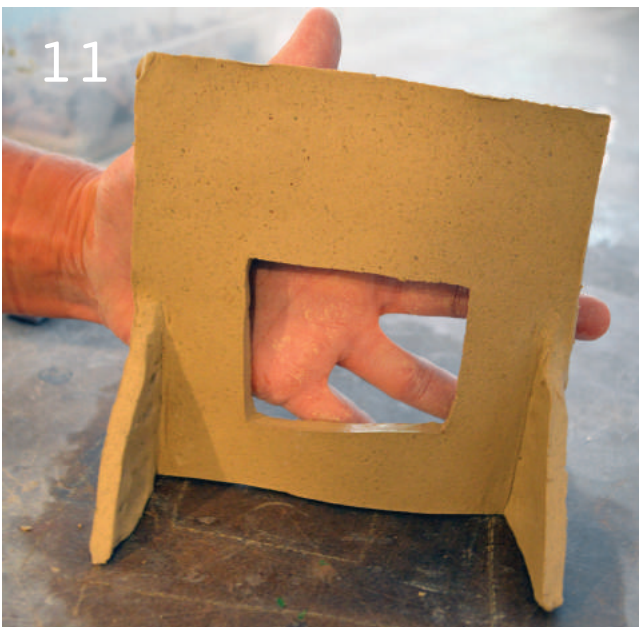
8. Using the inside square that you saved, cut it diagonally into 2 triangles.



8. Next, carefully turn your frame over and scratch-to-attach each triangle onto the bottom sides of your frame to become the stand.



10. Let your frame dry laying down.



11. Once dry, the triangle stands should support the frame upright.



12. Dry them completely, bisque fire, glaze and glaze fire.

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- Clay can explode when you fire it, if it is not built properly. If you have an air pocket in the clay that was created during the building stage, the air pocket explodes because when the water in the clay is heated in the kiln, it turns to steam and if the steam can't get out, it blows itself out. This can also happen if the clay is too thick. Anything that is built big must be hollow in the center and that hollow space needs an air hole to allow the steam to escape. I try to keep the thickness of the clay to ½" or less to be safe.
- All parts that are connected together need to be scored on both sides before attaching. This technique is typically called scoring and slipping, to help my students remember this important step, I call it "scratch-to-attach". If you skip this step, all of the parts you've added on will fall off when the clay dries.

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- When your glazed pieces go into the kiln and are fired, they will become liquid as they heat up and then turn to a solid hard surface when they cool. So glaze cannot go onto the bottom of the artwork or whatever surfaces touch the shelf it is sitting on, otherwise when the glaze cools it will get stuck to the shelf. I tell the students to not glaze the bottom of their pieces and if a little drips onto the bottom that it can be wiped off with a wet sponge.



- Before I load any glazed pieces into the kiln I check them all and wipe down the bottoms, you can end up with a real mess if one slips through. It will damage the artwork when you get it off the shelf as well as the shelf. When you are loading glazed pieces they cannot touch each other for the same reasons, two pieces will easily bond together with glaze. Once your pieces are glazed they are ready to go into the final glaze firing.

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HAVE FUN & B CR8IV!



CREATE WITH CLAY 3

by Jenni Ward,
ceramic artist





Flying Pig

Let your sense of humor fly with
this little winged animal





1. Start with a ball of clay and cut it into two equal pieces.



2. Roll those pieces into spheres.



3. Make the spheres into pinch pots by pushing your thumb into the center of the sphere and squeezing around the sides until you have a small bowl shape.



4. Take your scratching tool (wire tool, fork, comb...) and scratch-to-attach the edges of the bowls.



5. Gently push the pinch pots together.



6. Smooth out the seam with your fingers.



7. This hollow shape creates the body of your pig.



8. Make legs by rolling out snakes or coils of clay.



9. Scratch-to-attach the legs to the body.



10. Think about the position you want your pig to be in and start to attach them.



11. These legs are attached in an outstretched 'superman' pose.



12. To make the snout I made a 'mini-marshmallow' shape and used a poking tool to create the nostrils.



13. The eyes are small spheres that are flattened and poked to create pupils.



14. To make the ears I flatten a small pancake shape of clay and then cut out two equal triangles. All of your parts need to be scratched well.



15. Attach the ears to the head and smooth.



16. If you're making wings like I did, roll out two small coils of clay and gently press them flat.



17. Scratch the end of each shape and scratch the back of your pigs' body and attach them.



18. You can also add feathery texture to the wings with a tool.



19. I recommend using extra soft clay for the tail to prevent it from cracking.



20. Roll out a thin coil of clay and then wrap it up into a spiral.



21. Scratch to attach the tail.



22. Don't forget to poke a hole into the bottom of the pig to make sure it doesn't explode when it is fired!



23. Dry the pig completely, bisque fire, glaze and glaze fire.





Bird Nest

Learn how to create two very different textures from the same material



1. Take a piece of clay and roll it to make a smooth ball.



2. Make it into a pinch pot by pushing your thumb into the center of the sphere.



3. Continue squeezing around the sides until you have a bowl shape.



4. Collect various tools to scratch the surface of your clay (wire tool, fork, comb...)



5. Create a rough texture all over the outside bowl with one of your tools.



6. Finish the nest by scratching the inside surface as well.



7. Small pieces of clay are collected for the eggs.



8. Roll small spheres of clay in your hands and gently pinch one end to form the egg shape.



9. Dry the nest and eggs completely.



10. Bisque fire, glaze, and then glaze fire.



Puppies

Here's an easy way to make your clay creations have sturdy legs



1. Start by pulling three pieces of clay that are about as thick as a Sharpie marker, one slightly longer than the rest.



2. Use a rolling motion to create smooth snake like shapes out of each.



3. The largest piece is going to be the body and the tail. Make one end round for the head, and the other pointy for the tail.



4. The two smaller pieces are legs and are rolled to match each other.



5. Drape the two shorter leg pieces over the rolling pin to create two arches for the legs of your dog. If you want your dogs to have shorter or longer legs, just adjust the length. You can bend the ends to make feet for your dog.



6. Scratch the tops of the legs to prepare to attach.



7. Scratch the body to prepare to attach to the legs.



8. Place the body on the legs.



9. Use your fingertips to blend the legs to the body.



10. Pinch the head to create a pointy dog face.



11. Make two flat egg shapes for the ears and scratch to attach those on the head. You can position them up or floppy depending on your dog.



12. Draw a nose, eyes and a mouth on the head. Add details like toes, furry texture or accessories (collar, toys or a food bowl). Let your dog dry on their support structure and carefully slide them off when they are dry enough to support their own weight. Another option to a rolling pins is a cardboard paper towel roll or newspaper too, just make sure you have one for each student.



13. Dry the puppy completely, bisque fire, glaze and glaze fire.



Mad Hatter Teacups

Master the simple cup and there are all kinds of possibilities



1. Start with forming an oval ball.



2. Roll the ball to make a slab of clay that is about 10" x 5" long and about 3/8" thick.



3. Students may find a template useful for cutting out the basic shape. See end of project for the template used in this tutorial. Trace and cut cup shape out.



4. Lift cut clay and check that it has an even thickness.



5. The ends of the rectangle need to be scratched-to-attach as shown.



6. Wrap the rectangle into a cylinder, attaching the edges together.



7. Smooth seam with your fingers, on the inside and out.



8. If you have enough clay left over from your rectangle, use that, if not re-roll out all of your scrap pieces of clay. Place cylindrical on top of the slab and use a tool or a knife to trace around the perimeter.



9. Once cut, go ahead and scratch-to-attach the two pieces.



10. Blend edges together. I find it's easier to do this when the cup is upside down or if you put your hand on the inside of the cylinder and connect it with the other on the outside.



11. This creates a basic cup shape which could be used for a variety of projects but since we're making tea cups, the next step is to add a handle.



12. Using the extra clay that you have, cut out a long skinny rectangle of clay to start making the handle.



13. Fold the top of the handle over so that from the side it looks like half of a heart shape.



14. Scratch-to-attach the top and bottom of the heart shape and the top and bottom of your cup.



15. Press the handle on using your fingers on the inside and outside of your cup making sure it's secure. (Don't pick it up by the handle until its fired!!)



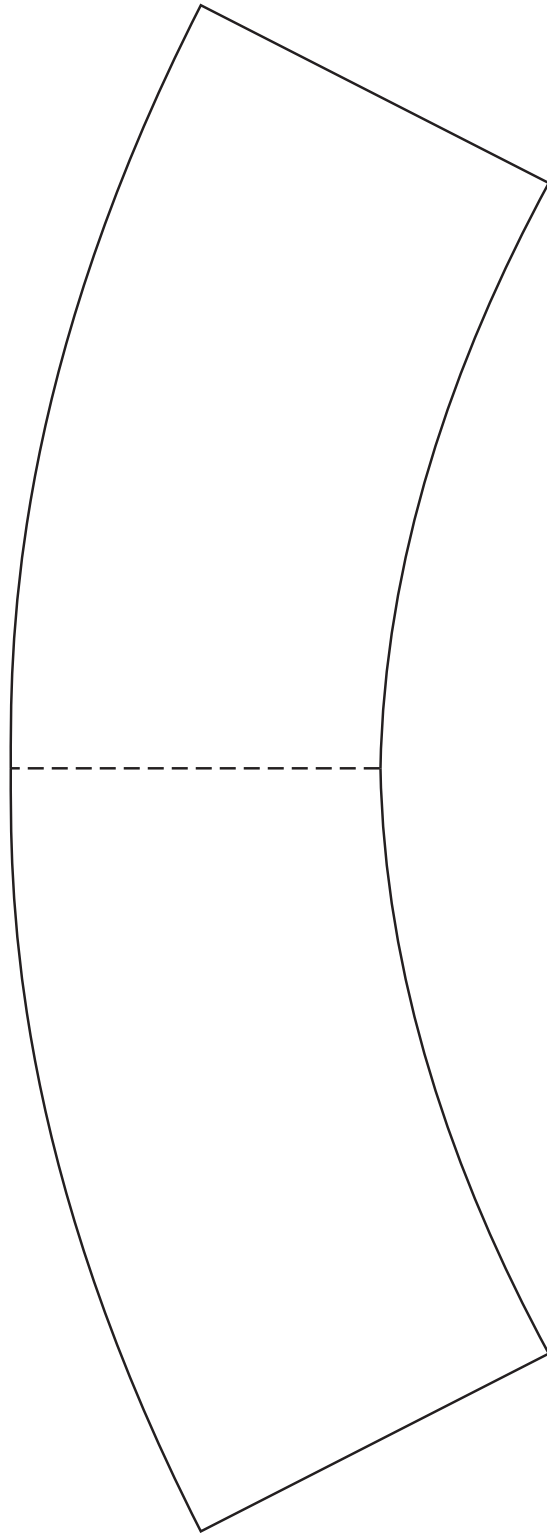
16. Your cup is complete and you're ready to decorate with textures. You can use the extra pieces of clay to create strips or polka dots to add on (remember to scratch-to-attach!) or you can use tools to push in the texture. Be sure to cover the entire surface of your cup.



17. Let the finished cup dry completely.



18. Bisque fire cup, glaze, and glaze fire.





Word Magnets

Create one-of-a-kind magnets with your own message



1. Have students roll out a slab of clay that is about 3/8" thick.



2. Use rubber alphabet and number stamps to create words on the slab of clay.



3. Press carefully to make even impressions.



4. Use a clay knife to cut around the edge of the word.



5. You can get creative and cut into a shape similar to the word (ie: C-L-O-U-D cut into a cloud shape).



6. Dry slowly and with a board weighted down on top of the pieces because they tend to curl on the edges and warp if they dry too fast. When they are dry, bisque fire the pieces.



7. When glazing the letters, use a brush to fill the letters with color, then use a damp sponge to wipe away any excess glaze around the edges of the letter. This will increase the contrast between the letters and the background so they are easy to read. Paint with a clear glaze over the entire surface to seal the surface with a shiny finish.



8. Glaze fire the pieces and when they are finished, glue high strength magnets onto the back of the clay. Some may need more than one magnet depending on the size.

Create with Clay: THE BASICS

Where do you get ceramic supplies?

- Your local ceramic supply store will be your best bet. They will have everything you need and are much cheaper than art supply stores that don't specialize in clay, plus they can answer all your clay questions.
- Many ceramic artists will mix up their own clay and glazes so there are lots of bags of powders and chemicals for sale at ceramic supply stores, don't be intimidated; clay and glazes come premixed in consistent, affordable, and understandable packaging too, but it helps to know what you want.

What if I don't have a kiln?

- A lot of ceramic supply stores will fire your work for you, the price is usually based on how much room it takes up in the kiln and what temperature you are firing to. So if you don't have a kiln, you can still create with clay in your classroom!

What kind of tools do I need?

I believe that there are so many similarities between cooking and working with clay. The tools seem interchangeable between the two, so take a look at some of the extra kitchen items you might have or pick some up at a yard sale. Over time you can add to your collection of tools but in the beginning, a few basics will do. My basic tool list:

- A knife for cutting
- A fork for scratching
- A skewer, pencil or sharpened chopstick
- A plastic or metal scraper (credit cards work!)
- A sponge
- Texture tools (shells, stamps, pinecones etc...)



About Clay:

- Clay comes in all different colors and textures, but more importantly they come in different temperature ranges, usually labeled as low fire, medium fire or high fire. The basics of choosing a clay body are temperature range, texture, plasticity and color. Your ceramic supply store will help you find the best clay for your classroom.
- The temperature of clay is measured in cones which are often represented on paper as a triangle; the cone ranges are on a negative and positive scale from $\Delta 022$ being the lowest to $\Delta 22$ being the highest.



- A low fire clay, which is what is best for classroom purposes is labeled as Δ05 and reaches about 1900°F. Most educational programs use low fire clays because they don't have to be fired as long of a time which means less money spent on running the kiln.
- When you pick a clay to use you need to know its properties, meaning that you need to know if it is good to hand build with or if it is better used as a wheel throwing clay body, this will be determined by the plasticity of the clay and the amount of grog or sand that is added to the clay. If you are wheel throwing you want a clay body that is smooth to the touch and has plasticity, when you chose a clay body for hand building you want to have a bit of grit to it so that it holds up the structure you are building.
- The color of your clay is a factor because when you glaze dark clay it will darken your glazes and possibly make them muddy looking while light colored clay will keep your glazes holding their true color. The color of the clay when it is wet may change after it has been fired.
- Premixed clay comes bagged in 25lb bags, I usually budget .5 - 1lb per student per project.
- Clay will never go bad if kept wrapped tightly in its plastic bag. If it does get dried out to the point of not being workable, it can be reclaimed with water. If you add enough water to it and let it sit in a bucket or the same bag it will soak up the water and will probably be too mushy. At that point you can lay it out in an even layer on a board and let it dry to the right working consistency again, you have to watch it, but you can use clay over and over again in this way. If you recycle your dry bits of clay to a working consistency, you will need to wedge (similar to kneading bread) your clay to get out any air bubbles that have been trapped in the clay. Once it is fired, you cannot reuse it to build with.
- Clay that is almost dry but still slightly workable is called leather hard clay. When it is completely dry but not fired yet, it is called bone dry. When it has been fired once the clay is now ceramic and it is called bisque or bisque ware. When it has been fired again with glaze it is called glaze ware.

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HAVE FUN & B CR8IV!



CREATE WITH CLAY 4

by Jenni Ward,
ceramic artist





Van Gogh Sunflowers

A great project to introduce students to Georgia O'Keeffe's flower painting or Vincent van Gogh's Sunflower



1. Roll out a large slab of clay that is about 3/8" thick. Use a small plastic plate with a piece of newspaper on it (to keep the clay from sticking) and lay the clay over the plate so that it's completely covered.



2. Use a tool to cut off the excess clay around the edges of the plate.



3. Poke a hole in the bottom of the clay so it doesn't explode when adding the middle of the flower.



4. Scratch the entire top of the circle to make it easier to add all of the petals.



5. Now use your excess clay to start shaping petals for your flower.



6. Repeat and cut as many petals as you can.



7. Prepare petals by scratching one corner.



8. Repeat until all the petals are scratched.



9. Start attaching petals to the base piece from the outside edge working towards the middle.



10. Keep adding rows of petals, alternating their placement.



11. Continue until you only have a small space left in the center.



12. For the center of the flower, start with a small ball.



13. Make a small pinch pot.



14. Turn the pinch pot upside down and scratch-to-attach the edges.



15. Make sure the center of the base is scratched also.



16. Press the flower center to attach.



17. Use a tool to add texture to the center of your flower.



18. Continue until the center is filled with texture.



19. Add texture to petals as shown.



20. Let your flower dry on the plate for support.



21. The flower will shrink away from the plate and release as it dries.



22. Bisque fire the flower, glaze and then glaze fire. You can hang your flowers on the wall using the hole you made in the bottom.



Bears

Attach arms and legs to a round body and you have the start of a cute sitting animal



1. Start with two equal pieces of clay.



2. Roll the two pieces into balls.



3. Shape into pinch pots by pushing your thumb into the center of the sphere and squeezing around the sides until you have a small bowl shape. Do the same to both pieces.



4. Take your scratching tool (wire tool, fork, comb...) and scratch-to-attach the edges of the bowls.



5. Gently press two pinch pots together.



6. Smooth out the seam with your fingers.



7. This creates the body of your bear.



8. Now use smaller pieces of extra clay to create your head, arms and legs.



9. Roll one piece into a small sphere for the head and roll four pieces into long cylinders for the arms and legs.



10. For the arms and legs, scratch the end of each coil and scratch the body where you want to attach them.



11. Attach and blend with your fingers the arms and legs.



12. Repeat until both arms and legs are attached.



13. Make one smaller pinch pot and turn it upside down onto the top of your body to create the head. Be sure to put a hole into the body of your bear so that it doesn't explode in the kiln.



14. Scratch-to-attach the head onto the body and blend it in well.



15. Add eye indents to the round head so that a bear head takes shape.



16. The ears are easy to make by cutting a small pancake shaped piece in half making two equal ears.



17. The nose, eyes, whiskers and other small details can be added on with extra clay or drawn in with a pointy tool.



18. The tail is a small coil of clay scratched on and blended in. You can also give your bear a furry texture by scoring the clay with your scratching tool.



19. You can push a small round tool into the ends of the coils to make paw prints.



20. Don't forget to poke a hole into the hollow space of your bear so that it doesn't explode in the kiln.



21. Let the bear dry, bisque fire, glaze and then glaze fire again.



House Numbers

*Show the world your creative side by
making one of a kind address numbers*



1. Roll out a slab of clay that is about 3/8" thick and smooth the surface of it.



2. Add texture to your clay by using rubber stamps, rubbing plates or texture tools.



3. Draw your numbers onto your clay using a pointed tool or trace paper templates.



4. Cut out each of your numbers, remove the excess clay and smooth the edges with your finger.



5. Use a tool to cut out holes so that you can hang your numbers with screws later. Clay shrinks as it's fired so make your holes slightly larger than the screws or nails you plan to hang your numbers with.



6. Let your numbers dry completely, it's helpful to put a board on top of the numbers to that they don't curl on the edges as they dry, then bisque fire, glaze and then glaze fire.



Burgers

*This is a great project to introduce
Pop Art to your students*



1. Start with two round pieces of clay, half an inch thick. Those will be the top and bottom bun.



2. Make another round piece of clay, a little thicker this time. This will be the pattie. To make it more realistic, add some texture with a tool.



3. To make lettuce, roll out a small, thin piece of clay and add lines to it for the veins in the leaf.



4. Making the edges curled will make it look more realistic.



5. Roll out a small, round piece of clay, and draw small triangles, all facing each other like the inside of a tomato slice.



6. For the cheese, cut out a flat square of clay.



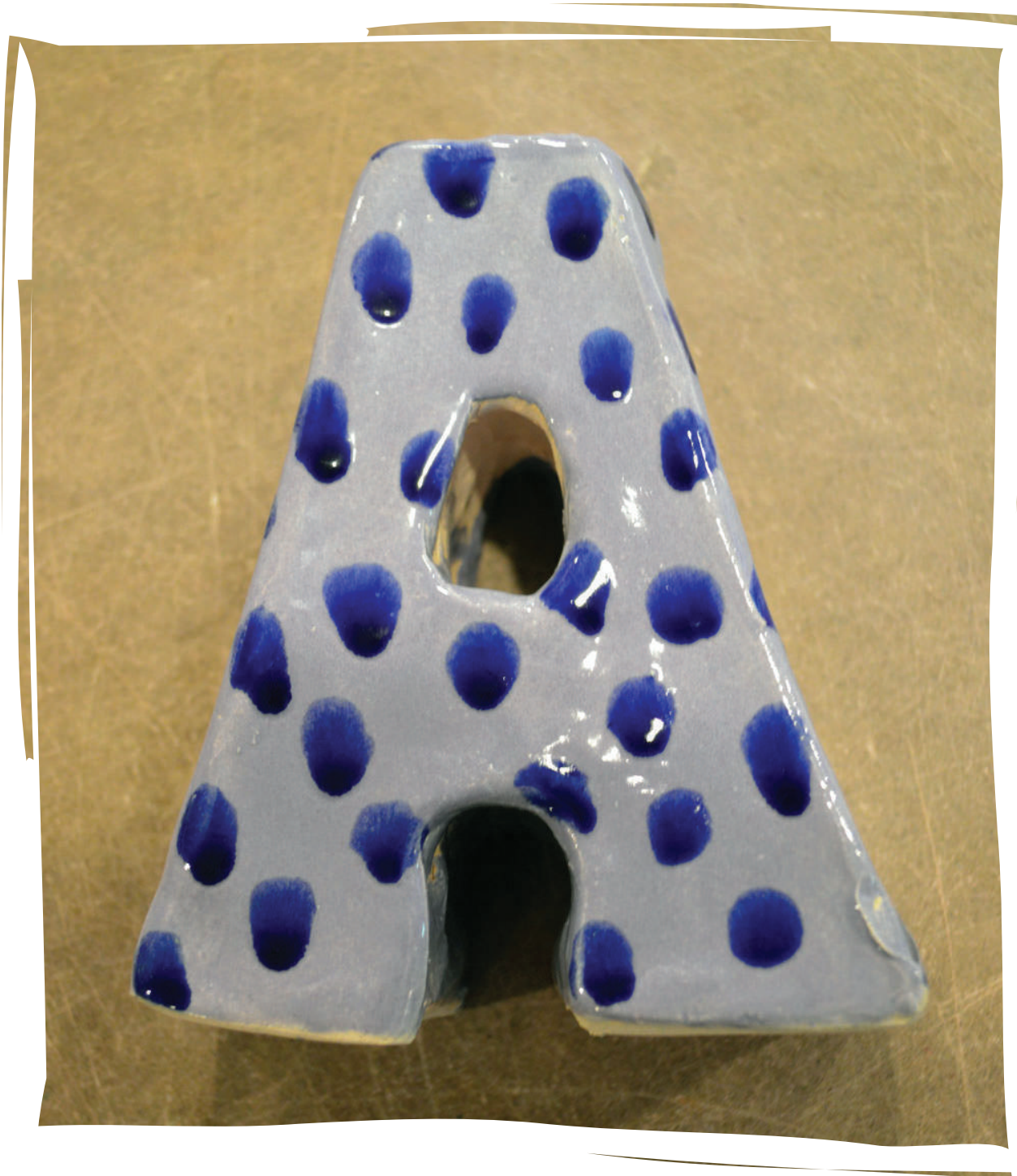
7. To add "seeds" to the top of the bun, scratch to attach small, teardrop shapes. This is the only item that is actually scratched to attached on.



8. All the items should be stacked and balanced well but NOT attached.



8. Bisque fire your burger and glaze each item separately. After all the items are glazed, they are re-stacked into your burger and when the burgers go in the glaze firing, the glaze will fuse the pieces together wherever they are touching. Be careful not to make your burgers too big or too tall or they will slide off each other in the kiln.



3D Letters

*Learn how to make letters that stand and
you open up a world of possibilities*



1. Start by rolling out a large slab of clay about 3/8" thick. Smooth it out with a flat tool.



2. Draw out the shape of your letter or lay down a paper template of a letter.



3. Cut out your letter with a sharp tool.



4. To make the back of your letter, trace the first one on top of another slab of clay and cut it out.



5. You should have 2 exact letters (one for the top and one for the bottom).



6. Using your scrap pieces of clay cut out a number of strips of clay that are all equal width, these will be used for the side walls of your letter.



7. I like to use the width of a rule to make the walls.



8. The width of the strips will determine how deep your 3-D letter will be.



9. Pick one letter that will be the bottom and start scratching the edges of your letter.



10. Attach the strips of clay to the scratched edges of the letter to build a wall that will go all the way around it.



11. Take your time to line up the curves and corners of your letter's shape.



12. Don't forget a wall for any inside shapes as well.



13. Use a finger or tool to blend the corner and make sure that the walls are attached securely.



14. Scratch the tops of the walls.



15. Scratch the edges of the final letter to attach as well.



16. Don't forget to scratch any inside shapes as well.



17. Use a finger or tool to blend the corner and make sure that the walls are attached securely.



18. Once you have gone around the entire shape scratch-to-attach the second letter on top of the walls. If your clay is really wet, the top letter may sag into the bottom one, to solve this, just let your clay dry a little bit more to give it more strength and then the top piece will sit evenly across.



19. Take time to attach the seam well, blending the clay with your fingers.



20. Make sure to punch a small hole into the hollow space to keep your letter from exploding in the kiln. You could make the hole on the back of the letter so that you can hang it on the wall or you can hide it on the bottom if your letter will be free standing.



21. Dry your letter completely, bisque fire, glaze and then glaze fire.

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- A lot of ceramic supply stores will fire your work for you, the price is usually based on how much room it takes up in the kiln and what temperature you are firing to. So if you don't have a kiln, you can still create with clay in your classroom!

What kind of tools do I need?

I believe that there are so many similarities between cooking and working with clay. The tools seem interchangeable between the two, so take a look at some of the extra kitchen items you might have or pick some up at a yard sale. Over time you can add to your collection of tools but in the beginning, a few basics will do. My basic tool list:

- A knife for cutting
- A fork for scratching
- A skewer, pencil or sharpened chopstick
- A plastic or metal scraper (credit cards work!)
- A sponge
- Texture tools (shells, stamps, pinecones etc...)



About Clay:

- Clay comes in all different colors and textures, but more importantly they come in different temperature ranges, usually labeled as low fire, medium fire or high fire. The basics of choosing a clay body are temperature range, texture, plasticity and color. Your ceramic supply store will help you find the best clay for your classroom.
- The temperature of clay is measured in cones which are often represented on paper as a triangle; the cone ranges are on a negative and positive scale from $\Delta 022$ being the lowest to $\Delta 22$ being the highest.



- A low fire clay, which is what is best for classroom purposes is labeled as Δ05 and reaches about 1900°F. Most educational programs use low fire clays because they don't have to be fired as long of a time which means less money spent on running the kiln.
- When you pick a clay to use you need to know its properties, meaning that you need to know if it is good to hand build with or if it is better used as a wheel throwing clay body, this will be determined by the plasticity of the clay and the amount of grog or sand that is added to the clay. If you are wheel throwing you want a clay body that is smooth to the touch and has plasticity, when you chose a clay body for hand building you want to have a bit of grit to it so that it holds up the structure you are building.
- The color of your clay is a factor because when you glaze dark clay it will darken your glazes and possibly make them muddy looking while light colored clay will keep your glazes holding their true color. The color of the clay when it is wet may change after it has been fired.
- Premixed clay comes bagged in 25lb bags, I usually budget .5 - 1lb per student per project.
- Clay will never go bad if kept wrapped tightly in its plastic bag. If it does get dried out to the point of not being workable, it can be reclaimed with water. If you add enough water to it and let it sit in a bucket or the same bag it will soak up the water and will probably be too mushy. At that point you can lay it out in an even layer on a board and let it dry to the right working consistency again, you have to watch it, but you can use clay over and over again in this way. If you recycle your dry bits of clay to a working consistency, you will need to wedge (similar to kneading bread) your clay to get out any air bubbles that have been trapped in the clay. Once it is fired, you cannot reuse it to build with.
- Clay that is almost dry but still slightly workable is called leather hard clay. When it is completely dry but not fired yet, it is called bone dry. When it has been fired once the clay is now ceramic and it is called bisque or bisque ware. When it has been fired again with glaze it is called glaze ware.

Building Basics:

There are a few basic rules that you need to follow with clay to have success with even the simplest project.

- Clay can explode when you fire it, if it is not built properly. If you have an air pocket in the clay that was created during the building stage, the air pocket explodes because when the water in the clay is heated in the kiln, it turns to steam and if the steam can't get out, it blows itself out. This can also happen if the clay is too thick. Anything that is built big must be hollow in the center and that hollow space needs an air hole to allow the steam to escape. I try to keep the thickness of the clay to ½" or less to be safe.
- All parts that are connected together need to be scored on both sides before attaching. This technique is typically called scoring and slipping, to help my students remember this important step, I call it "scratch-to-attach". If you skip this step, all of the parts you've added on will fall off when the clay dries.

Bisque Firing:

- There are two different firings that you need to do to finish your clay art, the first one is the bisque firing. The work must be completely dry before it goes into the bisque firing.

- The bisque firing turns your clay into ceramic by taking all the water out of the clay and starts to vitrify or close up the clay body so that it is not as porous. I usually bisque fire to a temperature referred to as Δ06 (called cone oh six in ceramic lingo). In this firing, you want to heat the kiln up slowly because if the temperature goes up too fast the artwork can explode.
- The clay can also explode if the clay goes through thermal expansion and contraction process too fast, just like a glass container going from the refrigerator to the hot oven, it will break. So when firing the kiln it needs to be turned up slowly and cooled down slowly to take care of the ware.
- When you are loading a bisque firing, the pieces can touch each other so you can carefully pile pieces inside or on top of other ones and fit as much as possible into the kiln. After the pieces have been bisque fired they are ready to be glazed.

About Glazes:

- Glazes also have different temperature ranges and they need to match your clay body temperature. If you have a low fire clay, then you need a low fire glaze.
- When using glazes with children it is important to check that the glazes are food and drink safe, which means that there is no lead or other toxic ingredients in the glaze.
- Glazes also come with different surfaces such as glossy, matt or satin. The store where you buy them usually has a sample of what the glaze looks like after it has been fired to help you choose the color and surface you want.
- If you can it is always good to create sample tags for students that can hang on the outside of each jar so that you always know what the glaze looks like once it's fired. Many glazes change color quite a bit during the firing process.
- When you are glazing onto your bisque ware you want to be careful to not contaminate your colors by using the same brush.
- When you paint on the glaze it will go on liquid and dry rather fast to a powdery pastel surface, once each layer has dried you can put on other colors or layers. The more layers you use the richer the color is but you generally don't need more than three.
- When your glazed pieces go into the kiln and are fired, they will become liquid as they heat up and then turn to a solid hard surface when they cool. So glaze cannot go onto the bottom of the artwork or whatever surfaces touch the shelf it is sitting on, otherwise when the glaze cools it will get stuck to the shelf. I tell the students to not glaze the bottom of their pieces and if a little drips onto the bottom that it can be wiped off with a wet sponge.



- Before I load any glazed pieces into the kiln I check them all and wipe down the bottoms, you can end up with a real mess if one slips through. It will damage the artwork when you get it off the shelf as well as the shelf. When you are loading glazed pieces they cannot touch each other for the same reasons, two pieces will easily bond together with glaze. Once your pieces are glazed they are ready to go into the final glaze firing.

Glaze Firing:

- The glaze firing is done to fuse the glazes to the clay.
- This firing will go to the temperature required to bring the glazes to their maturity which will be on the label of the jar and should also match the temperature of your clay.
- When the pieces are loaded they should have clean bottoms to keep them from sticking to the kiln shelves and they cannot touch each other or the sides of the kiln. This is really really really important!
- The kiln will need to be programmed for the cone temperature that you are going to and can be run slightly faster than you ran the bisque firing since if a piece makes it through the bisque it will not explode in the glaze firing.
- Allow the kiln to cool slowly once it has finished firing. If it cools too quickly the glazes will go through thermal shock and can flake off the clay.
- Once the kiln and the artwork have cooled they are finished and ready to use or display.

About Kilns:

- Kilns vary greatly depending on the brand and type, the biggest difference is what fuel they run on; kilns can be electric, gas or wood. Most schools have electric kilns because they are compact, safe and often have computerized firing cycles.
- To use an electric kiln you would start by stacking your ware on the bottom shelf, use posts to hold up the next set of shelves to build a second layer and so on until the kiln is full. Pick the appropriate computer program on the kiln (see your user manual) to run your firing, usually slow for a bisque firing and med for a glaze firing.
- When your kiln is done firing it will take hours to cool off. Don't open the kiln too early or too fast so the work can cool off slowly.



HAVE FUN & BE CREATIVE!