CREATE WITH CLAY

by Jenni Ward,
ceramic artist

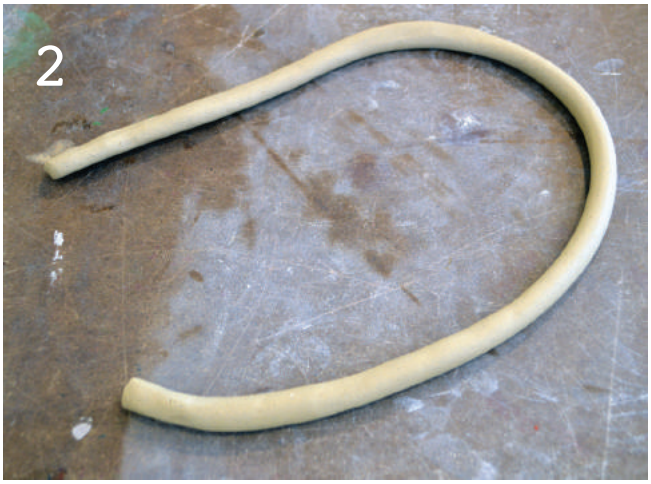
Texture Turtle

Practice your coil making

while creating this fun creature.

Jenni Ward
ceramic sculpture
where art & nature meet

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.

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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, you 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.

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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.

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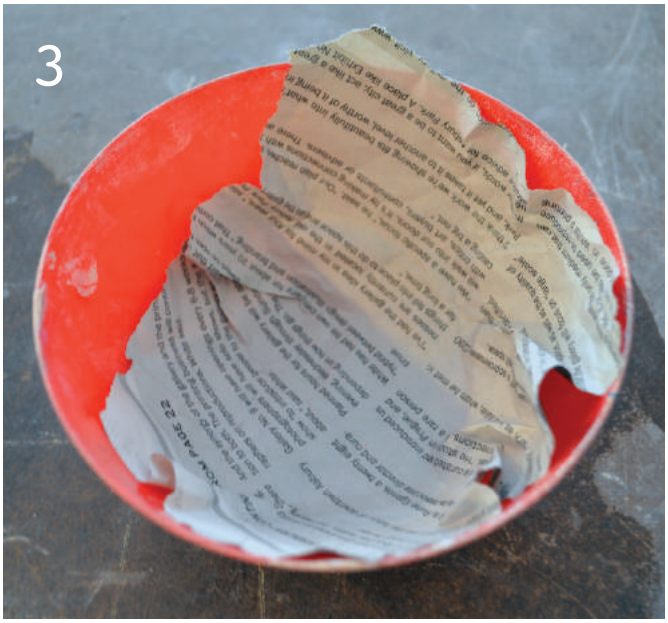
1. Roll out a large slab of clay that is about 3/8" thick and have students trace their hand 2-4 times. This may vary due to the size of the bowls you are using, and the size of the students hands.

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

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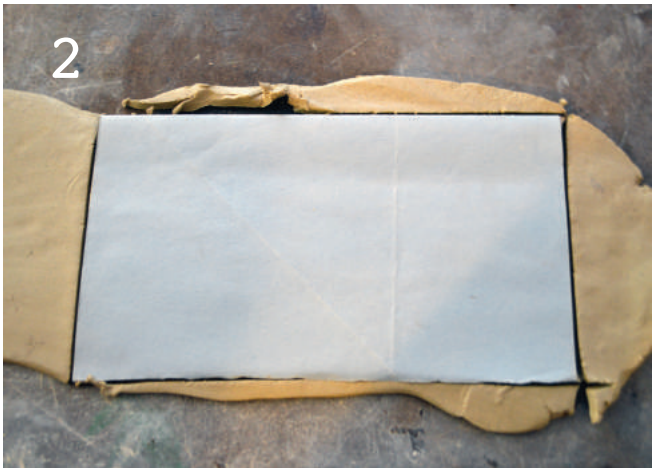
1. Start by rolling out a slab of clay that is about 3/8" thick and about 5" wide by 9" long.



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.

- 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 Δ022 being the lowest to Δ22 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 consistancy, 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 programed 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!