A Step-by-Step Guide for Creating a Clay Rattle

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(adapted from https://theartofeducation.edu)

1. Introduce the various histories of rattles.

Rattles are one of the oldest musical instruments and can be found in almost every culture. They are typically used to memorialize and celebrate individual beginnings.

For example, the birth of a child was commemorated with the giving of a rattle in Victorian times. In addition, in some cultures, rattles are used in healing rites or to communicate with spirits or ancestors. These ritualistic rattles are often embellished with designs or symbols.

Historically, rattles have been made out of natural materials like seed pods, gourds, dried beans, shells, pebbles, and even bones. These musical instruments have a hollow body which contains small loose beads of clay (or other material) that will make noise when shaken. Their sound is soothing and teaching kids how to create the sound they want is a powerful part of the lesson.

2. Demo the process.

- How to wedge the clay (more in step 4)
- How to form the pinch pot
- How to slip and score

3. Have them sketch their idea then pass out the clay and tools.

- Pre-proportioning speeds distribution
- HEB bags work, ziplocs are better if possible
- Tools can be simple paper clips, popsicle sticks, forks. Students will need water for attaching.
- Table coverings are helpful in clean up. Having masonite boards, cloth, or burlap pieces work well.

4. Wedge the clay to remove air bubbles.

I teach students to wedge clay by pressing the edges of their palms into the clay and pushing up, creating a “ram’s head” effect. The following video has a great example of this technique: www.youtube.com/watch?v=GNZhkHJ1ozE

5. Create two pinch pots.

Have students divide their clay into two separate pieces and begin making a simple pinch pot out of one of the pieces. Some students grasp this technique quickly while others need a bit more time. I remind students to keep the thickness of the pinch pot consistent. A good rule of thumb is to keep the walls about as thick as the width of their pinky fingernail. Once the first pinch pot is made, have students create another pinch pot with the remaining clay. Remind them to work hard to keep the pots similar in size.
6. Select the sound.
This step is fun for students because they get to select the sound their rattles will ultimately make. Larger clay balls make a deeper sound while tiny clay balls make a higher pitched sound. Have students wrap each clay ball or individually in small pieces of paper towel and place them into one of the pinch pots. They can add as many as they want, but generally, ten works well.

7. Scratch to attach!
Now that the pinch pots are full of their “rattles” it’s time to put them together! Make sure your students slip and score well before forming a ball out of their two halves. Have students use their damp fingers to smooth the seam.

8. Store projects properly.
- give students about ten minutes of cleanup time
- Wrap in process rattles in lightly damp paper towel if you won’t see them for a long time.
- Place them inside plastic grocery bags or ziplocs works well. Remove air, and remember to label.

9. Make the rattle decorative.
After the rattle base is created, students are challenged with turning it into something personal and artistic. You’ll want to model ways they can add or subtract clay as well as show them various ways to use other pinch, slab or coil techniques.

10. Add air holes and fire.
Make sure each student adds at least two air holes to their rattle and that the clay is bone dry before firing.

11. Shake and paint and shake some more!
- Color can be added with acrylic paint, glaze, or crayon. I like to use crayon and dip it in watered down black acrylic paint.
- Glaze will have to be added in at least 3 layers. Blick has a good quality and inexpensive class pack of glaze colors.
- If using Tempera paint or a crayon resist (pictured to the left) the final step may be to seal and add shine with a clear acrylic varnish like krystal clear. This should be done outdoors in a well ventilated area.

How to make 2 pinch pots that will fit together

![Images showing the process of making pinch pots](image_url)
Dia De Los Muertos Rattle Sketch

1. Plan your calavera front and side. Will it have hair? Wear a hat? What patterns will you add?
2. Wedge your clay
3. Create 2 Pinch pots
4. Add at least 10 rattles by making little balls of clay and wrapping each of them with paper
5. Score and Slip your pots together with your rattles inside.
6. Add your decorations. Use a paperclip for drawing in lines and patterns. Score and slip anything you add.
7. Remember to add a hole so that your artwork does not explode!
8. Be sure to store your work carefully and close your bag and clean up your work space.
HOW TO JOIN CLAY

1. SCORE
2. SLIP
3. STICK
4. SMOOTH

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THE 6 STAGES OF CLAY

1. SLIP
Watered down clay that can be used as a pottery glue.

2. PLASTIC
Clay you can easily mold and model.

3. LEATHER HARD
Clay that is somewhat dry. Good for carving.

4. BONE DRY
Clay that is dry and ready to be fired. Very fragile. Also called greenware.

5. BISQUEWARE
Clay that has been fired once in the kiln. Can never turn back into wet clay.

6. GLAZEWARE
Clay that has been fired again with glaze.

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SCORING is BORING, 
but I make lots of lines

SLIPPING is DIPPING, 
I like it just fine

SMOOTHING is SOOTHING, 
it relaxes my mind.
Dia De Los Muertos
Calavera Rattles

Rattling Bones

https://kids.nationalgeographic.com/explore/celebrations/day-of-the-dead/
How to Wedge

First, hit the clay into a cube.
How to make 2 pinch pots that will fit together

Begin with two balls of clay that are the same size.

Thumb hole in middle

1 pinched, 1 not yet!

If the rim is uneven— you can trim it with a fettling knife.

Seam will be covered with a coil or snake of clay.

These pinch pots fit together nicely!

Cracks need to be smoothed with a very small amount of water and your finger.
Score and Slip Poem

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but I make lots of lines

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Glazing and Finishing Techniques

Crayon Resist

Glazing

Painting
Kiln Firing Guide

Cones – purchase 05 (for both bisque and glaze)
Load kiln day **before** firing.

General instructions:
- Clay must be **COMPLETELY DRY** before firing. A good idea is when clay pieces are “leather” (which means they are somewhat dry and feel cool when touched) load them in the kiln to dry the rest of the way. Thoroughly dry clay objects take approximately 3 weeks to dry.
- Clay pieces must not be near or touching the KILN SITTER that is inside the kiln.
- Kiln shelves should be prepared with a KILN WASH.
- Bisque firing may have clay pieces touching each other and can be stacked or turned in other positions.
- Glaze firing may NOT have clay pieces touching each other. The bottoms where no glaze has been painted should be prepared with a wax resist and if there is glaze where the object will touch the kiln shelf, then KILN STILTS must be used.

1. On front of kiln sitter plate, pull FALLING WEIGHT up and hold in place.

2. While holding up FALLING WEIGHT – and inside the kiln – place the cone below the SENSING ROD and on top of the CONE SUPPORTS (this object is the KILN SITTER) with the flat side of the cone down.

3. Plug in kiln (or turn on breaker) to get power to the kiln.

4. Put lid down on kiln.

5. Plug all but the top peephole with PEEPHOLE PLUGS.
6. Turn all SWITCHES to LOW.

7. Set TIMER for 8 hours.

8. Press in the PLUNGER so it will lock (see diagram #1 on page 1)

9. Kiln must be started at 7:00 AM so it has time to complete its cycle and you can disconnect it completely before leaving school. Kilns must NOT be left on when you are not at school.

10. After 2 hours with the switches on the LOW setting, turn all SWITCHES to MEDIUM for 2 hours and put in the top peephole plug. Use a timer to help you remember.

11. After 2 hours with the switches on the MEDIUM setting, turn all SWITCHES to HIGH for the remainder of the firing time.

12. The CONE 05 will bend when maximum firing temperature has been reached and this releases the SENSING ROD which then triggers the FALLING WEIGHT on the front of the kiln to drop and turn off the kiln.

13. Cone 05 firing will take approximately 8 hours for bisque and glaze firing (which means 3:00 PM if started at 7:00 AM.

14. DO NOT attempt to open kiln or unload fired objects right after cycle is complete. Open or vent the next morning and unload in early afternoon.

15. Unplug the kiln or turn off breaker after the cycle is complete and before you leave school.

DEFINITIONS:

Kiln: a furnace or oven for burning, baking, or drying something, especially one for firing pottery

Bisque fire: is the first firing of unglazed clay, to a temperature just before vitrification (is the transformation of a substance into a glass which makes it impermeable to water) usually at a medium temperature

Glaze fire: a cycle of firing during which glaze materials are heated sufficiently to melt, forming a glassy surface coating when cooled
Kiln Policy, NEISD

The following guidelines must be followed when operating kilns in NEISD schools:

1. Kilns must be turned on for firing (not drying) no later than **7:30 AM**. Suggestion: load the kilns the night before.
2. Kilns may not be left on after you leave the campus for the day. **ALL kilns must have the breaker cut off or be unplugged** before leaving campus.
3. Kilns may not be used with a “pre-firing” (or drying) timed setting. Ceramic objects should be loaded when completely dry or loaded in the kiln during the leather-hard stage to finish air-drying in the kiln.
4. Kilns may not be used with a “cool down” timed setting.
5. You must check to see if all exhaust fans are working prior to firing. If exhaust is not working, do not fire. Call for repairs first.
6. Electronic kilns must be periodically checked during firing to make sure all is operating correctly.
7. Kiln-sitter kilns must be fired for 2 hours on the low setting (check periodically), 2 hours on medium setting (check periodically), and the remainder of the time on high setting (should be 4 more hours at Cone 05 — check periodically).
8. Fire kilns with top plug out for the first of the firing process.
9. NOTHING should be close to your kiln while firing. Only metal shelving should be in a kiln closet, but not too close. No combustibles should be there at all (paper, chemicals, wooden shelving, etc.).
10. Know where your fire extinguisher is.
11. Do not attempt or carry out kiln repairs yourself. Call Linda Fleetwood.

If there are any problems with your kilns, contact Linda Fleetwood immediately – 210-407-0356 (office), 210-381-6000 (cell), lfleet@neisd.net. I will contact the kiln repairman or our district facilities people in the case of an exhaust fan. My department pays for kiln repairs. Your campus or the district must cover the cost of facility repairs (like the exhaust fans and vents).

We have a kiln repairman for the district: Robert West rwest1@sbcglobal.net 210-846-3129
We have an NEISD facility person for kiln closets and exhaust fan: Mike Markley rmarkl@neisd.net

REMEMBER – You must have the work done through me, so make sure you call me first!
NEISD Teacher/Campus KILN AGREEMENT: Kiln Usage

I, ________________________________ will abide by all NEISD Kiln Usage policies and guidelines as set forth in the “Kiln Policy: NEISD.”

Printed Name ________________________________
Signed Name ________________________________
Campus ________________________________
Email ________________________________
Contact phone number ________________________________
Where is your kiln? (room number, closet, etc.) ________________________________

Date ________________________________