

## Byzantine Bell

Create a copper bell from metal foil and give it a salt-and-vinegar patina

### (art + history)

According to Encyclopedia Britannica, "A bell is a hollow vessel usually of metal, but sometimes of horn, wood, glass, or clay, struck near the rim by an interior clapper or exterior hammer or mallet to produce a ringing sound." The history of bells extends back almost to the dawn of civilization, when crude metallic objects were sounded to ward off evil spirits, to alter the weather, or to mark festive occasions. Bells were originally religious symbols in many ancient cultures, but they were also used to communicate imminent danger. A bell on ships was used to ring in every half hour, both to keep time and to alert the crew to changing shifts. "Eight bells" is a nautical expression for death and endings, meaning one's "shift" was done.

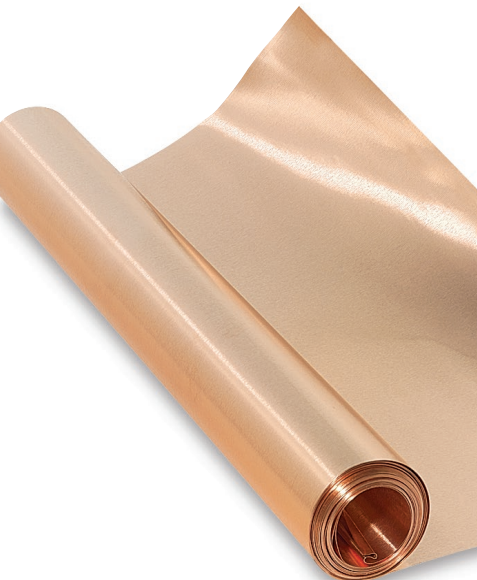
Ancient bells were originally crafted out of fired clay. Using their superior knowledge of pottery, the Chinese created the first "chiming" instrument. When metallurgy became commonplace, bells were made of tin, bronze, and silver. Metal bells soon far outranked those made from ceramic.

Metal bells were most often cast in bronze or other metals, but this lesson plan utilizes sheet metal to craft a folded bell. After embossing and adding a patina to copper, the sheet is folded into a three-sided triangle. With the addition of a clapper and hanging cord, the bell is complete!

**GRADES 5-12** Note: Instructions and materials are based upon a class size of 24 students. Adjust as needed.

### Preparation

1. Review the history, design, and use of bells.
2. Provide each student with a 12" piece of copper sheet to make a three-sided, 6" bell.



### Materials (required)

Pure Metal Tooling Foil, Copper, 12" x 10 ft (60503-8110); share two rolls across class

Blick<sup>®</sup> Aluminum Ruler, 12" (55430-1012); share five across class

Modeling Tools, Liner (60500-1010) and Modeler (60500-1020); share 15 of each style across class

Fiskars<sup>®</sup> Recycled Scissors, 8" Bent (57097-1108); share eight pairs across class

Plaid<sup>®</sup> Mod Podge<sup>®</sup>, Matte Finish, Pint (02916-1016); share one pint across class

E6000<sup>®</sup> Jewelry Adhesive, 3.7 oz tube (23802-1004); share one across class

Suede Lace, assorted colors, 1/8" x 75 ft spool (63014-); share one among class

Salt, 1 lb; share across class

White vinegar, 12 oz; share across class

Paper towels

Venetian Glass Bead Assortment, 1 lb (61549-1001)

### Optional Materials

Two-Tone Tooling Foil, 12" x 25 ft (60504-)

Windsor and Newton<sup>™</sup> All Purpose Varnish Spray 10.76 oz (02952-)

Golden<sup>®</sup> Heavy Body Matte Artist Acrylics, in shades of blue, green, and black (01603-)

## Process

1. Draw a 6" isosceles triangle on paper and cut it out to use as a pattern.
2. Trace around the triangle pattern onto a 12" square of copper sheet with an embossing tool. Move the pattern to the right of the first triangle so that the left side of the pattern runs along the right side of the first traced triangle. Repeat for the third side. On the last triangle's right edge, create a 1/2" overlap along the entire side for gluing.
3. Use embossing tools to emboss a design onto the three sides of the triangular bell. A pattern might be used to repeat the same design on all three sides, or each side could be different. Emboss from both sides. Incise a line, using a ruler, on the two inner edges of the triangle to aid in folding later. Cut a piece of copper into a shape to make a clapper. Emboss this piece too.

NOTE: Brushing Mod Podge on the copper sheet will result in areas that will retain the reflective copper surface and will not develop a patina.

4. Cover the embossed copper sheet with a paper towel soaked in plain white vinegar. Sprinkle a generous amount of salt on top and leave overnight. A natural patina will develop.
5. Remove the paper towel and allow the copper to dry thoroughly. Spray with fixative, or brush outdoor Mod Podge carefully over the entire piece to preserve the patina.
6. Fold the bottom edge of all three sides up 1/4" to avoid a sharp edge. Fold the flat piece of copper into a triangular three-dimensional shape by folding at the two edges of the triangle shapes. Glue the overlap to the inside of the bell with E6000 adhesive. (Alternately, make punches in the metal to allow a copper wire to run through and secure the edge).
7. Cut a small opening at the top of the triangle for the suede cord to go through. Create a loop for hanging and tie a knot on the cord.

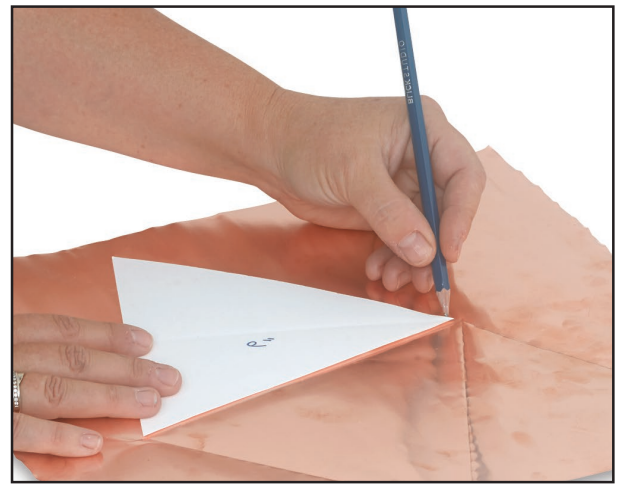
String the loop through the opening in the bell at the top. The knot will act as a stopper. String various beads onto the cord to act as a clapper, knot the cord again, and finish by adding the decorative copper clapper at the very bottom to catch the breeze.

## Options

— As a more economical option, use Two-Tone Tooling Foil, and finish with acrylic paints in green, turquoise, blue, and black shades. Wipe paint off while still damp, and layer shades to mimic a green copper patina.

— Make a string of nesting bells in graduated sizes.

— Make a small pair of copper pendants or ornaments.



**Step 1:** Trace isosceles triangle pattern onto copper sheet. Repeat, positioning adjacent sides together, three times. Cut out and emboss sides of bell with embossing tools.



**Step 2:** Lay vinegar-soaked paper towel over copper sheet. Sprinkle liberally with salt. Let set overnight. Allow to dry.



**Step 3:** Brush Mod Podge over patina, and allow to dry. Fold three sides in toward each other along edges, and glue. String loop, beads, and clapper onto suede lace. Hang!







## National Standards for Visual Arts Education

**Content Standard #1** — Understanding and applying media, techniques, and processes.

**5-8** • Students intentionally take advantage of the qualities and characteristics of art media, techniques, and processes to enhance communication of their experiences and ideas.

**9-12** • Students apply media, techniques, and processes with sufficient skill, confidence, and sensitivity that their intentions are carried out in their artworks.

**Content Standard #3** — Choosing and evaluating a range of subject matter, symbols, and ideas.

**5-8** • Students integrate visual, spatial, and temporal concepts with content to communicate intended meaning in their artworks.

**9-12** • Students reflect on how artworks differ visually, spatially, temporally, and functionally, and describe how these are related to history and culture.

