



# Lesson #13

## Creating Relief Sculpture

### A Lesson in Sculpture and mold-making using Scultamold®

We most often think of sculpture “in the round” or freestanding and finished on all sides. Another type of sculpture is relief sculpture. Relief sculptures are three-dimensional in depth, but are meant to be viewed from only one side. Often they are used as architectural decoration or as functional objects. Combining sculptural and pictorial technique in figurative relief sculpture requires intricate design, clear attention to detail, and a mastery of perspective. Relief sculpture was found in the tomb of Egyptian king Tutankhamen and reached perfection during the Renaissance in the work of such artists as Donatello, Ghiberti, and Della Robbia. In this lesson, students experience the process of creating relief sculptures using Scultamold.



## Lesson Goals and Objectives:

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1. Students will first design and create a sculptural relief using modeling clay.
2. Students will create latex rubber molds, and then using these molds, produce relief sculptures using Sculptamold®.
3. The lesson will incorporate art history, aesthetics, and criticism with a hands on activity.
4. The lesson will focus on important design elements and a variety of technical skills essential to mold-making and relief sculpture, as well as creative self-expression.

## Background and Preparation:

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1. This project has been designed for high school students, but can be modified for use with middle school students as well.
2. An overview of various types of sculpture should also be presented with an emphasis on relief sculpture. Relief sculpture is meant to be viewed from one side only. It is three-dimensional because it has depth, but does not occupy space independently. Most often relief sculpture decorates walls or other architectural forms. There are two types of relief sculpture, low relief (called bas-relief from the French) and high relief (haut-relief, in French). A low relief sculpture projects very slightly from the surface, like images on a coin. High relief sculptures project boldly from the background. Examples of famous relief sculptures are the walls of Egyptian tombs and Lorenzo Ghiberti's famous bronze doors for the Baptistry of the Florence Cathedral. In addition show examples of works by Donatello, Della Robbia, and contemporary artists such as Robert Longo.
3. The class should discuss moldmaking and both its artistic and functional applications. Basic techniques for creating molds should be presented. Students should also be familiar with the various materials that can be used to create relief sculpture.



*"Sleeping Baby" by Emily Boland.*

## Glossary:

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**Cast** — in sculpture, to duplicate an original design by means of a mold

**Composition** — the organization of form in a work of art; the disposition of shapes, masses, areas of light, dark, etc.

**Gesso** — Plaster of Paris or gypsum used to prepare canvasses; a ground for tempera painting

**Mold** — a shape in which a fluid substance is given form

**Mother Mold** — the larger mold used to hold the rubber latex mold in shape

**Patina** — originally the greenish color on the surface of old bronze; a look of mellowing with age

**Relief** — carving, molding, modeling, or stamping in which the design projects from the background surface. The degree that the relief projects from the surface can vary. A bas-relief (low relief) does not project very far, like the surface of a coin. A haut-relief (high relief) projects more boldly from the surface, giving the relief a much more sculptural or three-dimensional appearance.

**Sculpture** — a work of art that is meant to be viewed from more than one side; a work of art that is three-dimensional

**Slip** — clay diluted to a creamy consistency used for decorating

**Wash** — a thin, transparent layer of color

## Supplies:

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### Soft:

AMACO® Permoplast® CP Non-toxic (various colors)  
AMACO® Plast-i-Clay® AP Non-toxic (various colors)

### Medium:

AMACO® Artone Venus Modeling Clay AP  
Non-toxic — 51731Y

### Hard:

AMACO® Industrial Styling Clay (HBX-2) AP  
Non-toxic — 50716F  
AMACO® Modeling Tools  
AMACO® Antique Bronze Finishing Glaze — 76319C  
AMACO® Rubber Latex AP  
Non-toxic — 89915S  
Mold Release (8 oz. can) — 95070N  
AMACO® Sculptamold® CP  
Non-toxic (three sizes)  
AMACO® Rub 'n Buff® (various colors)

## Additional Supplies:

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Sketch Paper  
Pencil  
1/2 inch foam core board (or any other board available for classroom use)  
Plastic Wrap  
Masking Tape  
Scissors  
Mixing bowls  
Disposable plastic gloves  
Cheese Cloth  
Wire  
Baking Rack or additional boards for drying  
Water  
Tempera or acrylic paint  
Water colors  
Spackling

## Optional Equipment:

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Oven

## Instructions:

1. **Creating a composition** — Start with a rough sketch. The composition may include background or the figure may stand alone. Use photographs or models for detail.
2. **Preparing a board** — Shrink wrap and reinforce with tape  $\frac{1}{2}$  inch foam core as the base on which to build the clay. Plastic wrap makes de-molding much easier.
3. **Modeling with Permoplast<sup>®</sup>** — Following your sketch, create the relief using Permoplast<sup>®</sup> Modeling Clay. Non-hardening plasticine modeling clay requires less maintenance than water-based clay, especially for long-term projects. Because the mold is made directly from the clay, be sure that all the detail and design is in the clay. See photo #1.
4. **Making the rubber mold** — Seal the clay with two thin coats of AMACO<sup>®</sup> Antique Bronze Finishing Glaze, allowing two hours between coats. Wait 24 hours to be sure the sealant is dry before building the mold. Build the latex rubber mold by painting 10 to 15 (depending on the size of the project) coats on the clay model. Begin with very thin coats to avoid bubbles and to pick up all the detail. Paint the rubber onto the board to create a 1" flange around the piece. Be sure each coat dries thoroughly before applying the next. After about two-thirds of the coats are on, reinforce the next coat while still wet with strips of cheese cloth, and then continue building remaining coats. A large project requiring 15 coats could take two to three days to complete the rubber mold. See photo #2.
5. **Making the mother mold** — Wait 24 hours to be sure the rubber mold is dry and cured. Apply



Photo #1.



Photo #2.

**Instructions: CONTINUED**

a silicone separator to the rubber. Use Sculptamold<sup>®</sup> to make the mother mold. It is as sturdy as plaster, but much lighter. If the mold is large, reinforce with wire. Be sure to have a smooth, flat top in order to have a stable base later. Allow a few hours or overnight for the mother mold to set up. See photo #3.

6. **Demolding** — Using scissors, cut the plastic wrap around the mother mold to allow for easy release. Place a baking rack on top of the mother mold, and holding onto the rack and the board, turn the mold over so the baking rack is on the bottom and the board is on the top. See photo #4. Lift the board off. The bottom of the clay, covered by plastic wrap, is now exposed. Release the edges of the rubber from the mother mold and lift the rubber mold out. See photo #5. Turn this over onto a waiting board and peel the rubber mold off the clay. The clay is usually still in good shape and should be saved in case something has gone wrong and another mold needs to be made. Rinse the latex mold in warm water to clean off any clay residue and let the mother mold dry. The mother mold can be put into a low oven (170°F, 77°C) to hasten drying and inhibit the growth of mold.
7. **Casting the piece** — Place the latex mold back into the completely dry mother mold. Apply



Photo #3.



Photo #4.



Photo #5.

## **Instructions: CONTINUED**

a thin coat of Mold Release to the latex mold. See photo #6. Mix enough Sculptamold® according to directions to cover the inside of the mold with a thin layer. The Sculptamold® should be the consistency of oatmeal — not too thin and not lumpy. Spread the Sculptamold® into the mold a little at a time with your hands (wear throwaway plastic gloves), paying special attention to small indentations and fine detail. Be sure to smooth out air bubbles. When the entire surface of the mold has this thin coating, wait for it to set up (30-40 minutes) before continuing. See photo #7. Mix another batch of Sculptamold® and again using your hands (with gloves), distribute the mixture over the first coat. If the piece is small, fill the mold up. If it is large, keep it “hollow.” Hollowing the mold is good for two reasons: it keeps the cast light, and it distributes the weight more equally throughout the cast and avoids breakage. If the piece is even larger, reinforce with cheese cloth and add another layer of Sculptamold® to seal the cloth.

8. **De-molding the cast** — The cast must set up. A small piece may need only 45 minutes,



*Photo #6.*



*Photo #7.*

## Instructions: CONTINUED

while a larger one may need 1 1/2 hours. When the Sculptamold® has hardened, place a baking rack on top and turn the entire piece over. With the baking rack underneath, lift off the mother mold and carefully peel off the latex mold, paying careful attention to areas with fine details and undercuts. See photo #8. The piece now has to dry thoroughly. At this point, if you wish, you can cast another piece.

9. **Applying color** — Apply a coat of gesso to the dry, finished piece and let it dry. When the gesso is dry, color can be applied to the piece using a variety of materials — tempera paint for an opaque surface; water colors or acrylic washes for a more translucent surface; AMACO® Rub 'n Buff® for a lustrous metallic finish; or other possible colorants to create the desired surface.



Photo #8.



*"Angel In Archway" by Emily Boland.*

## Additional Suggestions:

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1. **Repairing the cast** — No matter how careful you are, damages or problems may occur — especially air holes. For patching, use commercial spackling. It's easy to use, dries quickly, and sands easily. When repairs are finished, sand with fine sand paper to a smooth surface.
2. **Assembling the composition** — If the cast is only a figure, and part of the larger composition, mount the cast on a prepared canvas board. The canvas can be colored as was the cast. Bulky or heavy pieces should be affixed with a glue gun or a heavy duty clear glue, paper and fabric with a white glue or wallpaper glue. After everything is glued in place, continue to apply paints and washes with sponges, rags, and brushes to achieve the desired effect.

This lesson is based on the work of artist Emily Boland. Examples of Sculptamold® relief sculptures were created by Emily Boland.

This is one lesson in a series of art plans for elementary and secondary programs using American Art Clay Co., Inc. products. Successful lessons will be considered for future publication.

Send your ideas and slides to David Gamble, National Marketing Director, American Art Clay Co., Inc.,



*"Mother and Baby" by Emily Boland.*