

# Article: Forensic Facial Reconstruction



**Figure 1. Markers indicate the depths of tissue to be added to the skull (a cast in this case). Measuring these depths is based on studies of males and females of different ancestral groups spanning a century. (Source: Smithsonian Institution)**

The skull provides clues to personal appearance. The brow ridge, the distance between the eye orbits (sockets), the shape of the nasal chamber, the shape and projection of the nasal bones, the chin's form, and the overall profile of the facial bones all influence facial features in life. Using these bones, artists and forensic anthropologists work together to reconstruct facial appearance through the process of forensic facial reconstruction.

Facial reconstruction is an exacting process. The finished product approximates the actual appearance, because the skull does not reflect the details of soft tissues—eye, hair, and skin color; facial hair; the shape of the lips; or how much fat tissue covers the bone. Yet, facial reconstruction can put a name on an unidentified body in a modern forensic case, or, in an archaeological investigation, a face on history.

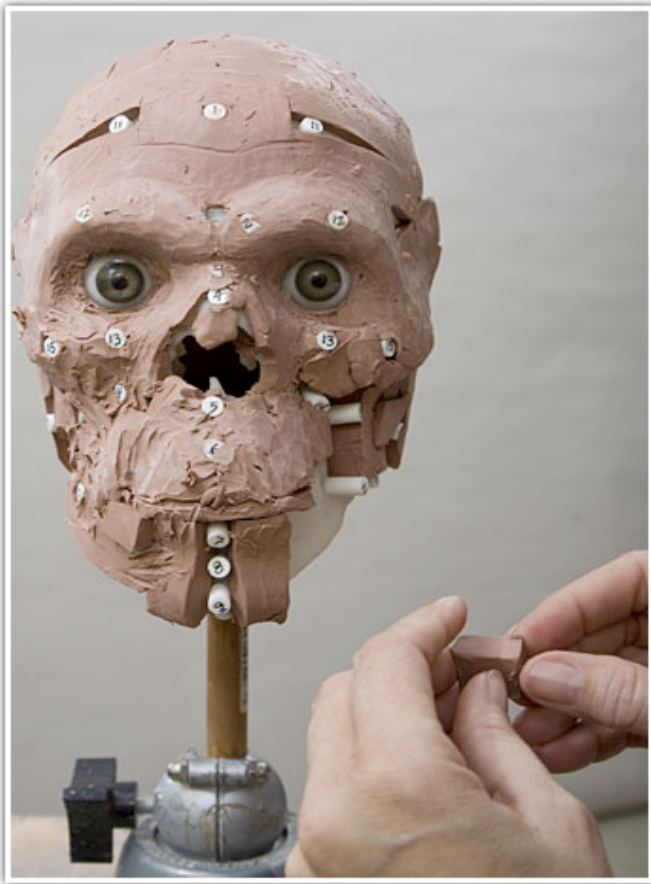
A trained sculptor, who is familiar with facial anatomy, works with a forensic anthropologist and uses clay to build the facial features. The forensic anthropologist interprets skeletal features such as the subject's age, sex, and ancestry, and anatomical characteristics such as facial asymmetry, evidence of injuries (a broken nose, for example), and loss of teeth before death. The artist's efforts are shown in the following images of the skeleton in the cellar.



**Figure 2. Applying strips of clay, the artist begins to rebuild the face, filling in around the markers with clay. (Source: Smithsonian Institution)**



**Figure 3. The artist begins to refine features around the artificial eyes. (Source: Smithsonian Institution)**



**Figure 4. The lips take shape.**  
(Source: Smithsonian Institution)



**Figure 5. Facial contours have been smoothed and subtle details added to accurately personalize the reconstruction of the skeleton in the cellar.**  
(Source: Smithsonian Institution)



**Figure 6: Finished reconstruction of the boy in the cellar.  
(Source: Smithsonian Institution)**



**Figure 7: Close-up of boy's face.  
(Source: Smithsonian Institutions)**



**Figure 9. Side view of the boy in the cellar.**  
(Source: Smithsonian Institution)



Smithsonian  
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This page is part of the [Smithsonian's The Secret in the Cellar Webcomic](#), an educational resource from the [Written in Bone](#) exhibition, February 2009 - 2011.