SKELETONS: Museum of Osteology

Forensic Osteology: Human Skulls

Teacher Resource

Grade Levels: University

Background:

In this program, forensic osteology is the process of analyzing defects to the human skull and associated dentition that are the result of trauma. Detailed cranial/dental measurements; knowledge of ballistic/blunt/sharp force wound patterns; and comprehensive documentation are essential to forensic osteology. The ultimate goal is to provide expert testimony in regards to the cause of death.

For a career in forensic osteology, an individual should have a bachelor's degree in anatomy, biology, chemistry, physiology or anthropology as well as a graduate degree in human biology or anthropology. Though a degree at the Master's level may qualify you to begin your investigative career, most forensic osteologists have a Ph.D. degree.

Vocabulary:

- Forensic Science
- Occipital Bone
- Nasal Bone
- Sagittal Suture
- Lambdoidal Suture
- Orbit
- Zygomatic Arch
- Incisor
- Molar
- Sphenoid Bone
- Mental Foramen
- Wormian Suture
- Concha
- Frontal Bone
- Temporal Bone
- Maxillary Bone
- Coronal Suture
- Bregma
- Occipital Condyle
- Supra-orbital Ridge
- Canine
- Mastoid Process
- Vomer
- Styloid Process
- Wormian Bone
- Enamel Hypoplasia
- Parietal Bone
- Squamous
- Palatine
- Squamosal Suture
- Lamda
- Foramen Magnum
- Mandible
- Premolar
- Occipital Protuberance
- Infraorbital/Supraorbital Foramen
- Pterygoid process (medial/lateral)
- External Auditory Meatus
- Dental Caries

Reference: visit the SKELETONS: Museum of Osteology Education web page at: http://skeletonmuseum.com/education

Recommended Reading:

Katzenberg, M. Anne and Grauer, Anne L.
2018 *Biological Anthropology of the Human Skeleton*. Wiley-Blackwell, Hoboken, NJ.

Larsen, Clark Spencer
1999 *Bioarchaeology: Interpreting Behavior from the Human Skeleton*. Cambridge University Press, Cambridge, United Kingdom.

Ortner, Donald J.
2003 *Identification of Pathological Conditions in Human Skeletal Remains*. Academic Press, Cambridge, MA.

White, Tim D. and Folkens, Pieter A.
2005 *The Human Bone Manual*. Academic Press, Cambridge, MA.

White, Tim D., Black, Michael T. and Folkens, Pieter A.
2011 *Human Osteology*. Elsevier Science, Amsterdam, Netherlands.

While at SKELETONS:

- Visit the Pathology Exhibit and have students point out various types of bone injuries, diseases, and traumas.
- Discuss what types of information we can learn about an individual from their skeletal remains.
- At the Pathology Exhibit, discuss the various bone cells and the role they play in the bone remodeling process.
- Discuss sexual dimorphism in humans while visiting the Pathology Exhibit and Primate Exhibit.
- Have your students discuss the scientific approach they would use to evaluate the human skull for various types of trauma.