Identification of The Human Skeleton

A knowledge of human anatomy, particularly skeletal anatomy, will be essential in this class. We will study primates and their evolutionary relationships, the traits of our hominin ancestors, and the relationships between modern human populations, all of which use data based on skeletal traits. Specific bones and features will be frequently mentioned in lecture and in lab, so you must be familiar with them. In this lab you will begin learning the bones of the skull. Each bone has been marked with a letter, while features are marked with numbers, and teeth with symbols. Once you have identified the bone, the diagrams of that bone will help you identify the features. In two weeks, you will turn to the remainder of the skeleton.

You will need to know these bones and features for the human osteology lab practicum the week on February 15th or 16th (depending on which lab you are in). To study for the practicum, take the time to familiarize yourself with the shapes of the bone, how they articulate with other bones around them, and where the features are. During the practicum, you will be given 25 bones and features that you will have to identify. Spelling will not count, however, your choice of spelling must make it obvious which bone you mean. For example, I will accept "humerous" in lieu of "humerus", but I will not accept "fibia" instead of "fibula".

You will probably need to spend some extra time in the lab learning your bones. Available times will be announced in class and posted to the class wiki.

The following vocabulary might be useful for understanding bone features:
- articular surface – an area where two bones interact (articulate)
- condyle – rounded articular surface
- cranial bones – the bones of the skull and mandible
- crest – a ridge, especially a sharper one
- facet – a flat, smooth articular surface
- foramen – a hole
- fossa – a deep depression
- head – a rounded articular surface
- meatus – a small opening
- post-cranial bones – all bones that do not include the skull and mandible
- process – a prominent or elongated portion of a bone
- spine – a projection or pointed area of a bone
- sulcus – a groove
- trochanter – a larger, blunt process
- tubercle – a small, rounded process
- tuberosity – a large, rough, raised portion on the bone

In addition, this lab will introduce you to some of the vocabulary used by osteologists to refer to the position of certain bones and features.

**buccal vs. lingual** – used to describe portions of teeth. Lingual refers to the side closest to the tongue, and buccal refers to the side closest to the lips or cheek. Test yourself by identifying the buccal and lingual sides of a molar and incisor.

**anterior vs. posterior** – terms applied to any bone in the body. Anterior means in front, and posterior behind. They are applied to portions of the bone that are in front or in back relative to the direction a person faces when standing. Test yourself by identifying the anterior and posterior portions of the mandible and palatine.
In today’s lab, you will identify the bones and major features of the human skull. You will be provided with skulls that have letters on the bones, numbers on the features, and symbols on the teeth. Write the appropriate number, letter, or symbol in each blank. Each skull is different, so use the same skull throughout the lab. Write the letter identifying the skull here:__________. Once you have finished, you can compare your answers to a Key that the instructor has. This worksheet is yours to keep, and will not be collected for points.

CRANIAL BONES (letters):
- ethmoid
- frontal
- lacrimal
- mandible (dentary)
- maxilla
- nasal
- occipital
- palatine
- parietal
- palatine
- sphenoid
- temporal (squamosal)
- vomer
- zygomatic (malar or jugal)

CRANIAL FEATURES (numbers):
- ascending ramus
- coronal suture
- external auditory meatus
- foramen magnum
- lambdoidal suture
- nuchal ridge
- sagittal suture
- squamosal suture
- supraorbital torus (brow ridge)
- zygomatic arch

TEETH (symbols):
- canine
- central (first) incisor
- first molar
- fourth premolar
- lateral (second) incisor
- second molar
- third molar
- third premolar

**PLEASE NOTE:** On the practicum, the skulls WILL NOT have these letters, numbers, or symbols. You must be able to identify the bone and feature without them.