**By the end of lab:**

Students should be able to:

* Explain the difference between the axial and appendicular skeleton, identify parts of the body associated with each
* Describe the composition of bone and explain the differences between compact bone and spongy bone
* Identify the major structural components of bone on a slide (i.e. osteon, central canal, lamellae, lacunae, canaliculi, perforating canals) and the purpose of each
* Identify the different types of bone (i.e. long, short, flat etc.) and provide an example of each
* Identify the part so the long bone
* Identify the major cranial bones and facial bones (and associated bone markings)
* Explain the purpose of a fontanel – and identify the two major fontanels
* List all 4 major sinuses and explain where they are located
* Differentiate between the vertebral types and know how many there are of each type
* Identify the major structural components of the different vertebrae
* Visually identify C1 and C2 and know their functions (and why they’re important)
* ID the sacrum and coccyx and understand how many bones fuse to form these structures
* Identify/differentiate between the primary and secondary curvatures of the vertebral column
* Identify and differentiate between the three abnormal curvatures of the vertebral column
* Know and identify the major parts of the sternum
* Be able to identify (on an articulated skeleton) which ribs are true, false or floating, know how many of each there are, and what the difference is between them
* Know what the hyoid is and why it is unique in the skeletal system (i.e. does not articulate with any other bone in the body)

**NOTE: for every structure on the terms list they should know where it is, what it does, what it articulates with, and what would happen if it were missing or non-functional**

**Materials required:**

Lab coat

Closed shoes

Long pants

Compound light microscopes

Prepared Microscope Slides:

* Bone
* Articulated and disarticulated skeletons
* Articulated and disarticulated skulls

**Extra Credit Quiz Question Suggestions:**

1. The skeletal system is made up of osseous tissue – which of the four main types of tissues does this group belong in?
2. The human skeleton is broken down into how many main divisions?
   1. 1
   2. 2
   3. 3
   4. 4
3. Which parts of the body are NOT included in the axial skeleton
   1. Head
   2. Spinal column
   3. Arms and legs
   4. pelvis
4. True/False: the hands are included in the axial skeleton
5. True/False: the ribs are included in the axial skeleton
6. Bone tissue contains what kind of cells in their lacunae?
   1. chondrocytes
   2. neuroglia
   3. osteocytes
   4. bone tissue does not contain cells