



### **What you need to ID sheet – Articulated Skeleton**

This sheet tells you what you need to be able to identify on the articulated skeleton in the Learning Commons – check the “to know” sheet for anything else you may need to know about this topic. Most of these are ID’d on the disarticulated bones in lab.

You are **done** with this model when you can identify **all** of the following structures: OK, for this model you should go to the “What You Need To Know Sheet – Unit #2.” The bones/markings visible on the articulated skeleton are on p. 2 of this sheet.

You should be able to ID almost all of the bones and bone markings that you are supposed to know using the disarticulated bones in the lab except for the markings inside the cranium (like crista galli, cribriform plate, sella turcica, lesser wings, the paranasal sinuses, etc.) and the features of the types of vertebra.

### **Key kinds of things to find on this model:**

A good place to **start** with this model is Figure 6.3, p. 81 in your lab manual as an overview.

1. Find the groups of bones (axial vs. appendicular divisions, skull, vertebra, bony thorax (sternum, ribs), hyoid bone, pectoral girdle, pelvic girdle, upper limb, lower limb, carpals, tarsals, phalanges, etc.).
2. All the bones and bone markings indicated on the “What You Need To Know Sheet – Unit #2” that are visible (i.e., not the markings inside the skull, etc.)
3. Which marking of one bone articulates to which marking of another bone at the joints
4. The visible examples of the different types of fibrous joints (sutures, syndesmoses) and cartilaginous joints (synchondroses, symphyses) – Tables 9.2 and 9.4 in the lab manual and p. 1 of the What You Need To Know Sheet – Unit #2.
5. Visible skeletal cartilages (skeletal elements that are made of cartilage rather than bone) – specifically: the costal cartilages, the intervertebral discs and the pubic symphysis.
6. Which bones are short bones, flat bones, irregular bones, sesamoid bones (patellas on the skeleton) and long bones and the parts of a long bone that are visible externally (diaphysis, proximal and distal epiphysis).

## Specific Bones/Bone Markings that are visible on the Articulated Skeleton – in outline form:

(*bone* names are in **boldface**; not all of the bone markings that you need to know are on the articulated skeleton!

This list only includes those that you *can see* on the articulated skeleton)

### Axial Skeleton:

- A. Skull (coronal, sagittal, squamous, lambdoidal sutures)
1. Cranium
    - **frontal bone**
    - **L/R parietal bone**
    - **L/R temporal bone** - external acoustic meatus, mandibular fossa, mastoid process, styloid process, zygomatic process & zygomatic arch
    - **occipital bone** – foramen magnum, occipital condyles
    - **sphenoid bone** – greater wings, optic canal
    - **ethmoid bone**
  2. facial bones
    - **mandible** – condylar head, mandibular foramen, mental foramen
    - **maxilla** – palatine process
    - **L/R palatine bone**
    - **L/R zygomatic bone**
    - **L/R lacrimal bone**
    - **L/R nasal bone**
    - **vomer**
    - **L/R inferior nasal concha**
  3. associated bones
    - **hyoid bone**
- B. Vertebral Column
1. features of all vertebrae (some more easily observed on disarticulated vertebrae) – vertebral body, intervertebral disc, intervertebral foramen, spinous process, superior and inferior articular processes, superior and inferior articular facets, vertebral arch (pedicle, lamina), vertebral foramen, transverse processes
  2. the five divisions of the vertebral column (cervical, thoracic, lumbar, sacrum, coccyx) and the designation system for the vertebrae (C1, C2, etc.)
  3. the four normal curves of the vertebral column and which are primary vs. secondary curves
  4. Identify the **sacrum** and **coccyx**
  5. Identify the **atlas** and the **axis** (but also recognize them in lab as disarticulated vertebrae)
  6. note any distinguishing characteristics of cervical vs. thoracic vs. lumbar vertebrae that are visible (but also recognize them to their group as disarticulated vertebrae in lab)
- D. Bony Thorax
1. **Sternum**- sternal body (gladiolus), manubrium, xiphoid process
  2. **L/R rib** – false, floating, true (vertebrosternal) & vertebrocostal ribs (also: costal cartilages)

### Appendicular Skeleton:

- A. Pectoral Girdle
1. **L/R scapula** - acromion, coracoid process, glenoid cavity, spine
  2. **L/R clavicle**-acromial end, sternal end
- B. Upper Extremity (Upper Limb)
1. **L/R humerus**- capitulum, coronoid fossa, head, lateral epicondyle, medial epicondyle, olecranon fossa, radial fossa, trochlea,
  2. **L/R ulna** – coronoid process, olecranon, radial notch, trochlear (semilunar) notch, styloid process
  3. **L/R radius** – radial head, radial tuberosity, styloid process, ulnar notch
  4. Carpals – **L/R capitate, L/R hamate, L/R lunate, L/R pisiform, L/R scaphoid, L/R trapezium, L/R trapezoid, L/R triquetrum**
  5. **L/R metacarpals** each metacarpal's name includes L or R, its number (1 to 5)
  6. **Phalanges** – each phalanx's name includes L or R, its number (1 to 5) and position (proximal, middle, distal); for example, a wedding ring traditionally is worn on the **left fourth proximal phalanx**
- C. Pelvic Girdle
1. **L/R coxal bone** – acetabulum, iliac crest, ilium portion, ischial spine, ischial tuberosity, ischium portion, obturator foramen, pubis portion; pubic symphysis, sacroiliac joint; skeleton in the Learning Commons is a female (note its *female* pelvis)
- D. Lower Extremity (Lower Limb)
1. **L/R femur** – greater trochanter, lesser trochanter, head, lateral condyle, medial condyle, neck, patellar surface
  2. **L/R patella**
  3. **L/R tibia** – anterior margin, lateral condyle, medial condyle, medial malleolus, tibial tuberosity
  4. **L/R fibula** – anterior crest, lateral malleolus
  5. Tarsals – **L/R calcaneus, L/R cuboid, L/R first (medial) cuneiform, L/R navicular, L/R second (intermediate) cuneiform, L/R talus, L/R third (lateral) cuneiform**
  6. **L/R metatarsals** each metatarsal's name includes L or R, its number (1 to 5)
  7. **Phalanges** – each phalanx's name includes L or R, its number (1 to 5) and position (proximal, middle, distal); for example, the distal phalanx of the left pinky toe is the **left fifth distal phalanx**