OVERVIEW OF THE SKELETON

1. **Classification of bones by shape**
   - List the four (4) bone shapes
     - identify examples of each shape on the skeleton

2. **Haversian system (osteon) of compact bone**
   - Sketch an idealized osteon and label the following:
     - Haversian canal
     - lamellae
     - lacunae
     - osteocyte
     - canaliculi
   - View a glass slide of compact bone. Sketch a region of a bone specimen that includes at least two osteon units.
     - Are any of the structures from your idealized sketch above not clearly visible in the prepared slides? If so, name it (them).
   - Name the two divisions of the skeletal system
     - 
     - 

3. **Axial Skeleton**
   - Name the three regions of the axial skeleton
     - ____________, _____________ & ____________
     - Next locate these regions on the skeleton, diagrams or yourself
b) **Skull**

Using a skull and diagrams, identify the cranial and facial bones discussed in lecture.

**Cranial bones**
- 1 – frontal bone
- 2 – parietal bones
- 1 – occipital bone
- 2 – temporal bones

**Facial bones**
- 2 – maxillae
- 2 – palatine bones
- 2 – zygomatic bones
- 2 – nasal bones
- 1 – mandible

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c) **Vertebral Column**

i. Using bones, the torso and diagrams, observe a typical thoracic vertebra.

ii. Sketch, identify and describe the functions of its parts:

- body
- facets
- vertebral foramen
- articular processes
- spinous and transverse processes
- intervertebral discs
d) **Bony Thorax** (rib cage)

- **List the two principal functions of the rib cage**
  1. _______
  2. _______

- **Describe “true” and “false” ribs and their differences**

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4. **Appendicular Skeleton**

a) **Describe** the two major regions of the appendicular skeleton

b) Using the skeleton and diagrams:

- **Identify the bones of the pectoral and pelvic girdles and their attached limbs**
  
  **Pectoral girdle**
  - scapula
  - clavicle
  - glenoid fossa
  - humerus

  **Pelvic girdle**
  - coxal (hip) bones
  - acetabulum
  - femur

- **Describe** the relative functions and stability of the two girdles

- **Locate the bones of the arm, wrist and hand**
  - humerus
  - radius
  - ulna
  - carpal
  - metacarpals
  - phalanges

- **Identify the bones of the leg, ankle and foot**
  - femur
  - tibia
  - fibula
  - tarsals
  - metatarsals
  - phalanges
5. JOINTS
   a) COMPLETE the following grid
   b) VIEW examples of each on the skeleton
   c) CIRCLE an example of each on the unlabeled “walking” illustration below

<table>
<thead>
<tr>
<th>Joint function (descriptive)</th>
<th>Joint function (formal name)</th>
<th>Joint Structure</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>complete</td>
<td>immovable</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>view</td>
<td>amphiarthroses</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>circle</td>
<td>synovial</td>
<td></td>
</tr>
</tbody>
</table>

d) In the above left figure, which large posterior-inferior cranial bone has been left out? ________________ Draw its superior border into the picture.

6. ASSEMBLY
Assemble a skeleton on your tabletop utilizing the contents of your group’s bone box. In the event that some bones are missing, borrow them from a neighbor to complete the job. Be sure to return all borrowed bones.