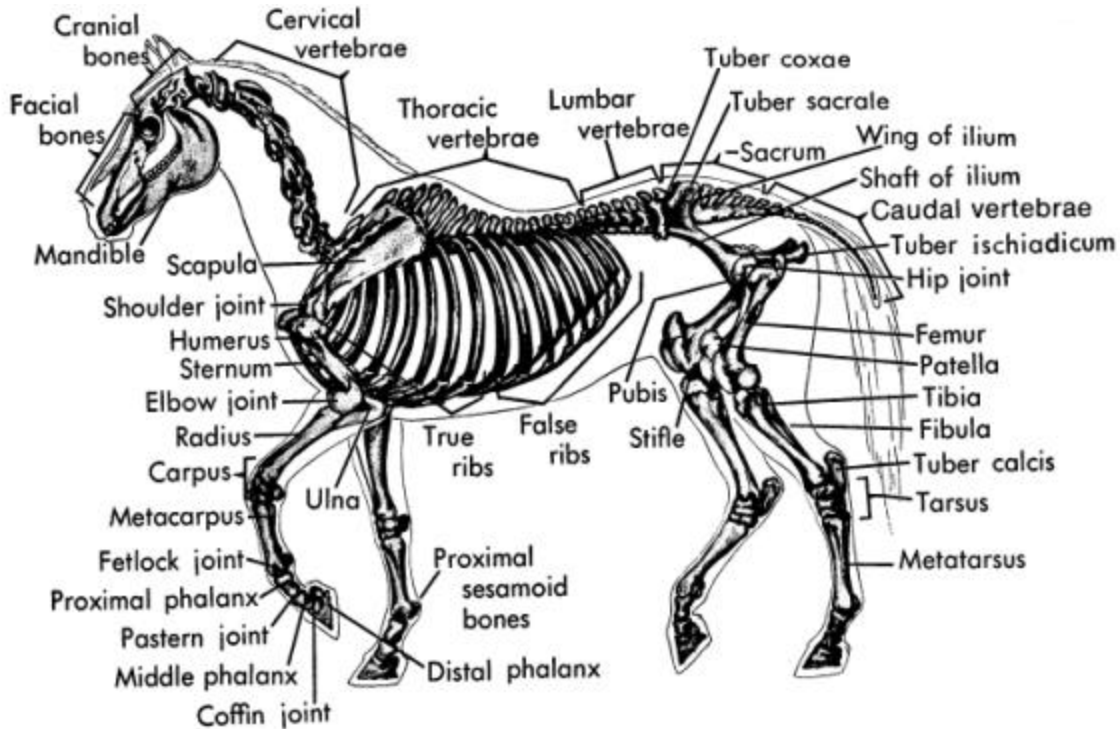


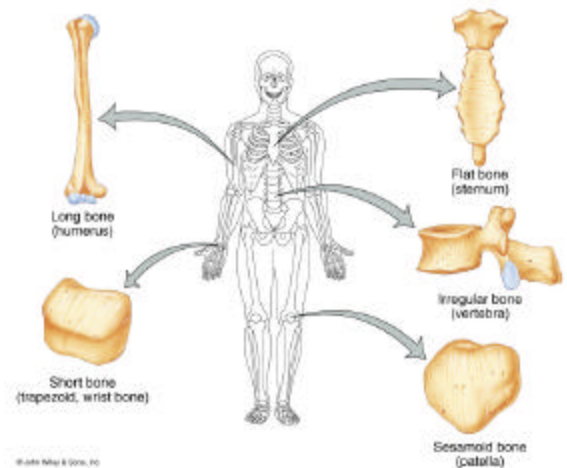
## The Skeletal System

- Axial Skeleton
  - skull, mandible, hyoid, vertebrae, ribs, sternum, ear ossicles
- Appendicular Skeleton
  - upper & lower limbs and pelvic girdle



## Types of Bones

- 5 basic types of bones:
  - long = compact
  - short = spongy except surface
  - flat = plates of compact enclosing spongy
  - irregular = variable
  - sesamoid = develop in tendons or ligaments (patella)
- Sutural bones = in joint between skull bones



## Bone Surface Markings

- Surface features-- rough area, groove, openings, process
- Specific functions

- passageway for blood vessels and nerves
- joint formation
- muscle attachment & contraction

### Bone Surface Markings

- Foramen = opening
- Fossa = shallow depression
- Sulcus = groove
- Meatus = tubelike passageway or canal
- Condyle = large, round protuberance
- Facet = smooth flat articular surface
- Trochanter = very large projection
- Tuberosity = large, rounded, roughened projection
- Learning the terms found in this Table will simplify your study of the skeleton.

### Axial Skeleton: The Skull

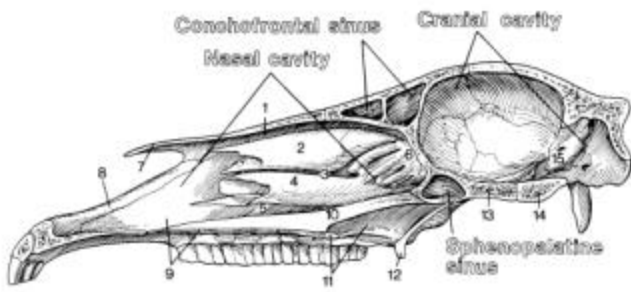


Figure 2

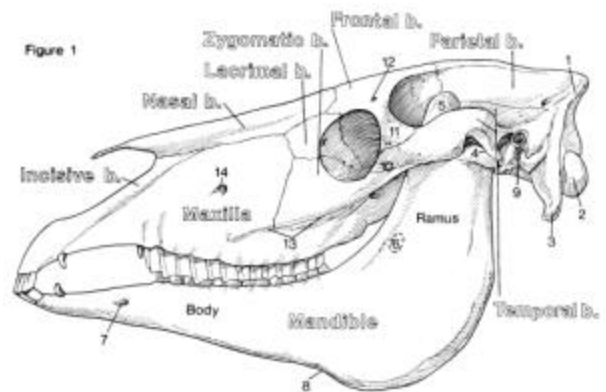
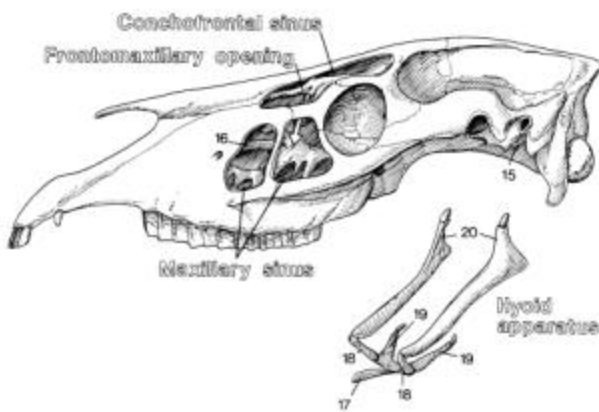


Figure 1

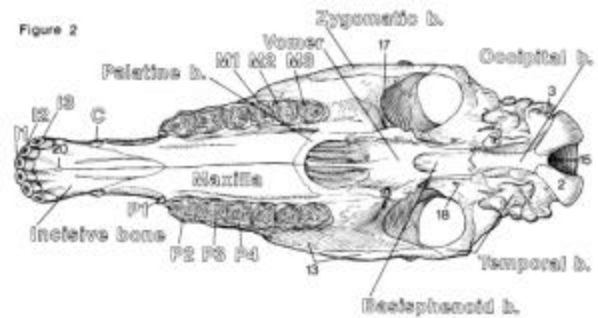


Figure 2

- Skull consists of two portions:
  - cranial bones: surround the brain
    - occipital
    - parietal
    - interparietal

- temporal
- frontal
- ethmoid
- sphenoid
- facial bones: remainder of skull bones
  - pterygoid
  - lacrimal
  - nasal
  - palatine
  - conchae (turbinates)
  - maxilla
  - incisive (premaxilla)
  - zygomatic (malar)
- Other skull related bones
  - Vomer
  - Mandible
  - Hyoid

### Vertebrae

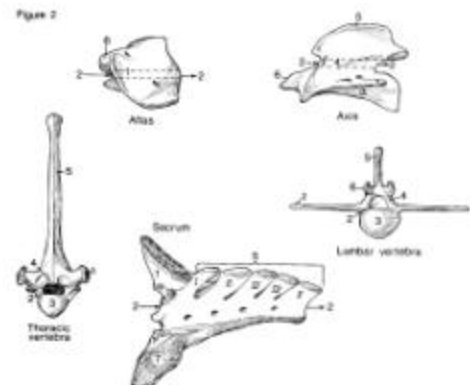
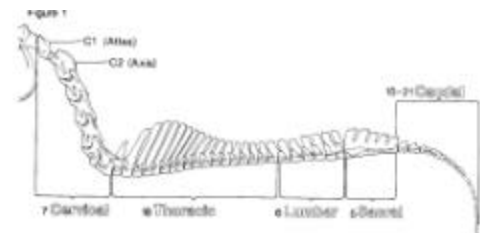
- Cervical: (C) Neck region
- Thoracic: (T) chest region
- Lumbar: (L) loin region
- Sacral: (S) in region of pelvis; fused vertebrae
- Lumber-sacral: (LS) fused lumbar and sacral (fowl)
- Caudal (Coccygeal): (Cd) located in tail

Species	C	T	L	S	Cd
Horse	7	18	6	5	15-20
Cow	7	13	6	5	18-20
Sheep	7	13	6-7	4	16-18
Goat	7	13	7	4	12
Hog	7	14-15	6-7	4	20-23
Dog	7	13	7	3	20-23
Chicken	14	7	(LS) 14		
Man	7	12	5	5	4

- C1: Atlas, first cervical vertebra
- C2: Axis, second cervical vertebra

### Sternum

- Manubrium



- Body
- Xiphoid

### Ribs

- Head and tubercle articulate with facets
- Body with costal groove containing nerve & blood vessels
- Intercostal spaces contain intercostal muscles

### Rib Articulation

- Tubercle articulates with transverse process
- Head articulates with vertebral bodies

