Mammals= Large cerebellum/ cerebral cortex for complex thought processes.

The Lower Jaw: In first land vertebrates there were 4-6 bones. Now 1 in modern mammals, which gives fewer joints and greater mechanical strength.

Teeth: Have evolved from uniform homodont dentition found in fish and reptiles to specialised teeth inmammals. Herbivores lack canines, carnivores have enlarged canines. Omnivores have all of these.Monodont= One ToothHomodont= Same teethHeterodont= Different teethDiphodont= Permanent teethPolyphydont= Constantly replaced

Hypsodont= High crowned for wear and tear.

The Spine: Relatively standard in all vertebrates. Protects spinal cord, remain flexible, support pectoral and pelvic girdles and skull.

Teleost fish= Well ossified vertebrae, notochord persists within each centrum. Neural arch associated with each centrum. Hemal arches in caudal vertebrae.

Other fish= More cartilaginous with differing centraFrogs= only one cervical vertebraReptiles= around 7 cervical vertebraeBirds= variesMammals= 7 cervical vertebrae

Limbs: The bones have remained fairly standard and conform to a basic pattern, but have modified in length and thickness depending on function.

Pentadactyl limb= The five fingered structure of limbs in vertebrates.

Biserial fins= Central axis of bone or cartilage with a reiss of radial bones. Pronounced basal lobe. Found in lungfish, precursor of tetrapods.

Ray fins= found in right to bony fish. No bas in the no skeletal elements within the fin other than radials. Fin fold rins= extended base of attack ment, common in ancient sharks but living sharks also have broad fleshy base. Have basal cartilages and a row of distal cartilages.

Limbs of tetrapods: Adaptive modifications are usually shown in the reduction of bones. Some tetrapods have lost one or both pairs of appendages.

Loss of limbs: No limbs like snakes, caecilians and snake-like lizards. Forelimbs only (manatees, cetaceans, manatees, dugongs, salamanders). Hindlimbs only (boas and pythons, some lizards and ratite birds). Front/upper limb: The humerus varies little in the tetrapods. Modifications in the hand region involve reduction of bines by loss or fusion.

Bird's wing= Birds only have 3 digits. The 3 metacarpals are fused to the carpals to form a rigid unit. Bat's Wing= Metacarpals and the last four phalanges become greatly elongated to support the wing membrane.

Aquatic tetrapod= The anterior limb became modified paddles.