

Know the Mammalian Subclasses

1-Prototheria

2-Theria

--metatheria – marsupials

--eutheria - placentals

Know the Eutherian Superorders (and the orders that make up each Superorder)

**Afrotheria* – *Africa & Madagascar*

-Proboscidea

-hyracoidea

-sirenia

-tubulidentata

-macroscelidea

-afrosoricida

**Xenarthra*

-Cingulata

-Pilosa

**Euarchontoglires*

-Rodentia

-Lagomorpha

-----Rodentia & Lagomorpha make group called Glires

-primates

-dermoptera

-scandentia

----Dermoptera & scandentia are tree shrews (colugos)

**Laurasiatheria*

-soricomorpha

-erinaceomorpha

-----sorico & erinaceo are hedgehogs

--chiroptera

---cetacea

---artiodactyla – even toed ungulates

-----cetacea + artiodactyla = Cetartiodactyla

---perissodactyla – odd toed ungulates

-----philodota

-----carnivora

Know the common names for the Mammal Orders
Marsupials, placentals & monotremata?
Know features of Monotremata

Know features of Marsupials

Know features of Eutherians

-Egg shell membrane lost, intrauterine gestation
prolonged w/ suppression of estrous cycle, corpus
callosum connects cerebral hemispheres, uterers pass
lateral to Mullerian ducts into a median vagina, details
of dentition – upper molars w/ narrow styelar shelves

Know the shared features of all extant Mammals

1 – Lactation

-Mammal glands absent in male marsupials

-nipples present in therians

2 – Epiphyses on long bones

3 – Braincase enclosed

4 – heterodont dentition

- 5 – dentary squamosal articulation
- 6 – upright posture
- 7 - crurotarsal joint & calcaneum
- 8 – Pelvic girdle arrangements (ileum, ischium, pubis)
- 9 – 7 cervical vertebrae & unique atlas-axis complex
- 10 – spine can be twisted lateral & dorsoventral directions
- 11 – hair
 - sensory, insulation, communication
- 12 – Glandular structures
 - Eccrine & Apocrine (sweat), Sebaceous, Mammary
- 13 – Claws, nails, hooves, & horns
 - derived from keratin or bone
- 14 – Adipose tissue (white & brown)
- 15 – Heart with complete ventricular septum & 1 systemic arch
 - Erythrocytes lack nuclei
- 16 – Respiratory system (alveoli, diaphragm)
- 17 – urogenital system (baculum)

Know sensory systems of all extant mammals

Olfaction

- Keen sense of smell related to endothermy
- Nasoturbinal and Ethmoturbinal bones –olfactory receptors
- Olfactory bulb

Vision

- Visual sensitivity important in low light
- Retinas composed of rod cells (sensitive to light)