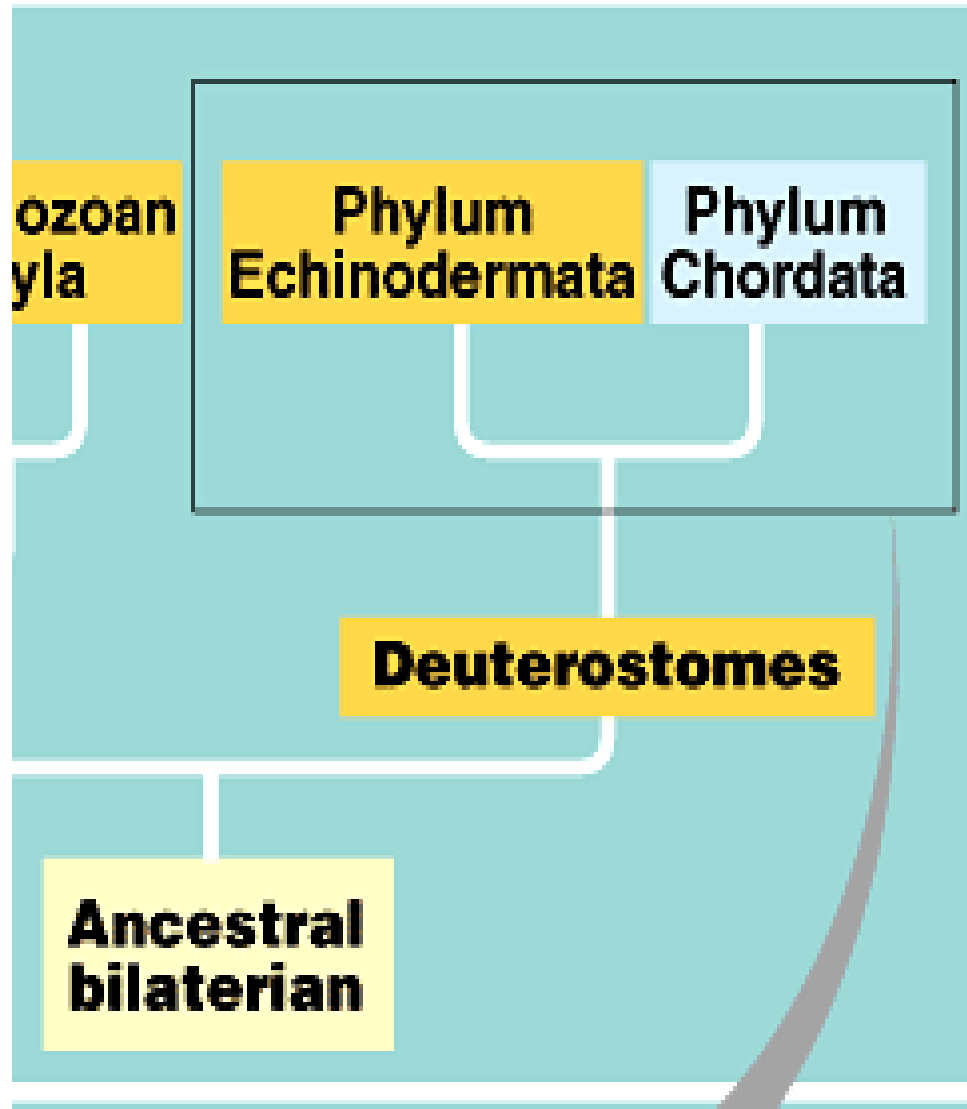


Pre AP Biology

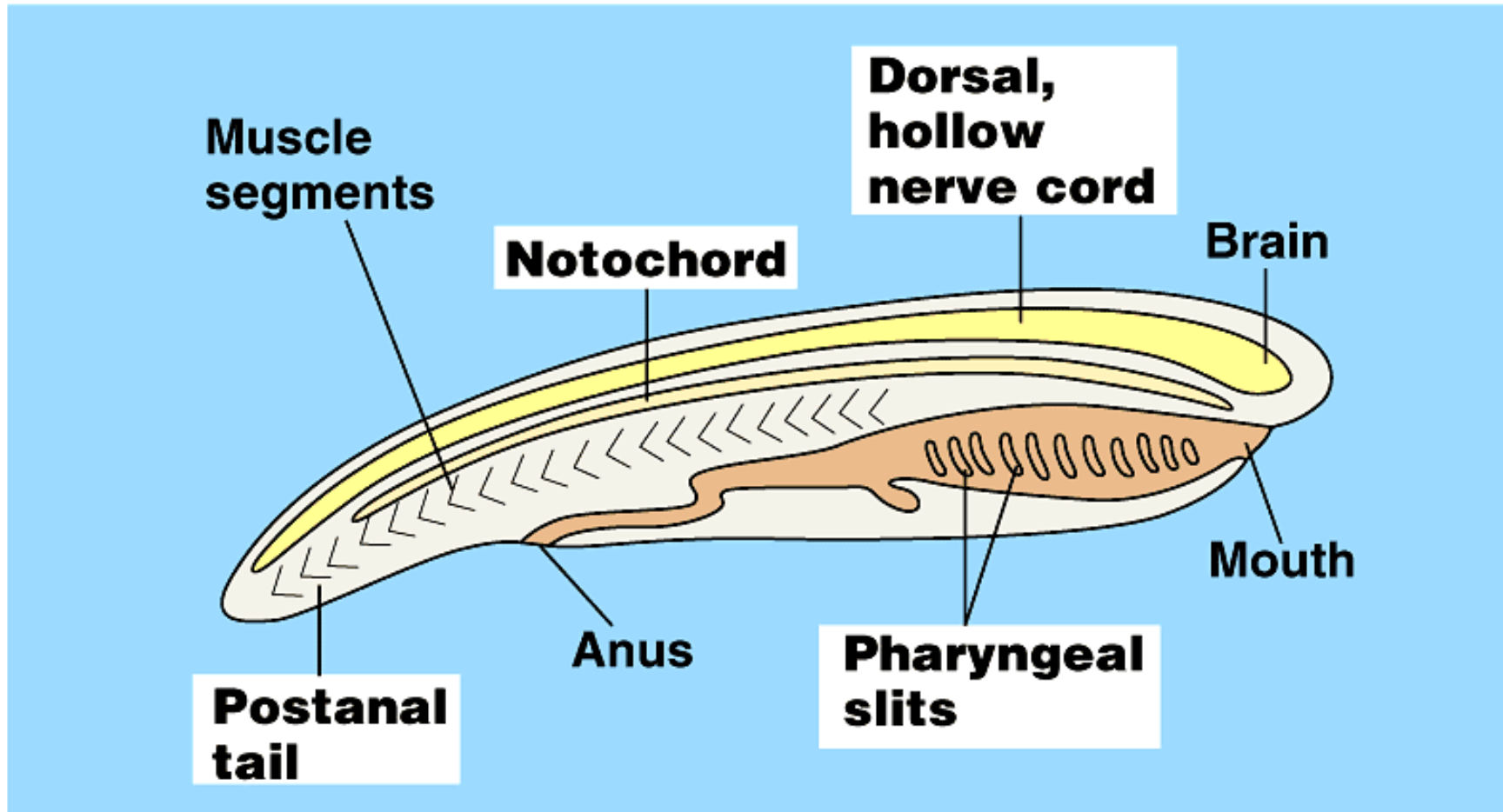
Animal Kingdom Vertebrates (8.15)

Part 1

Chordata Evolution



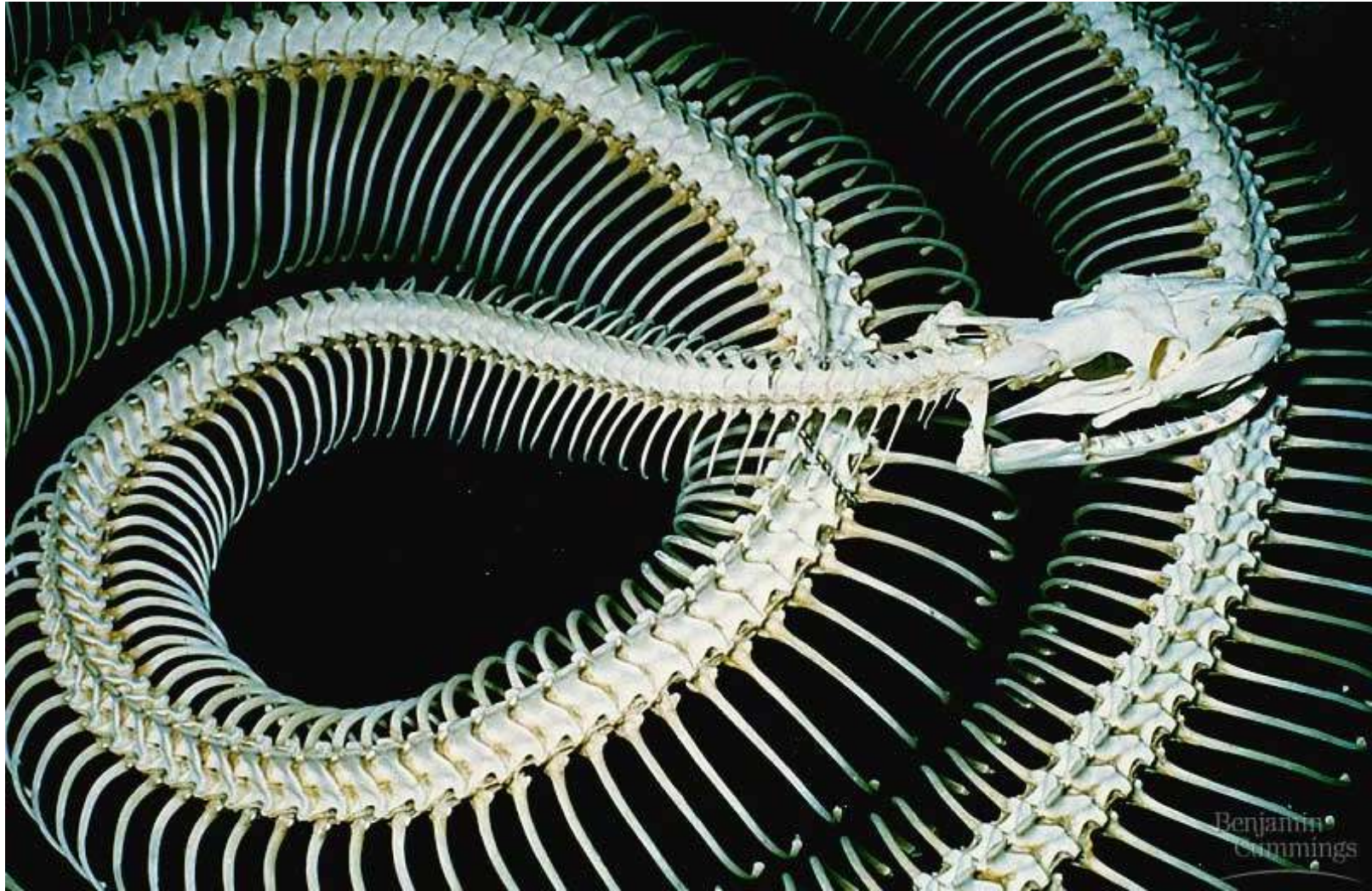
Vertebrate Basic Body Structure



Cephalization



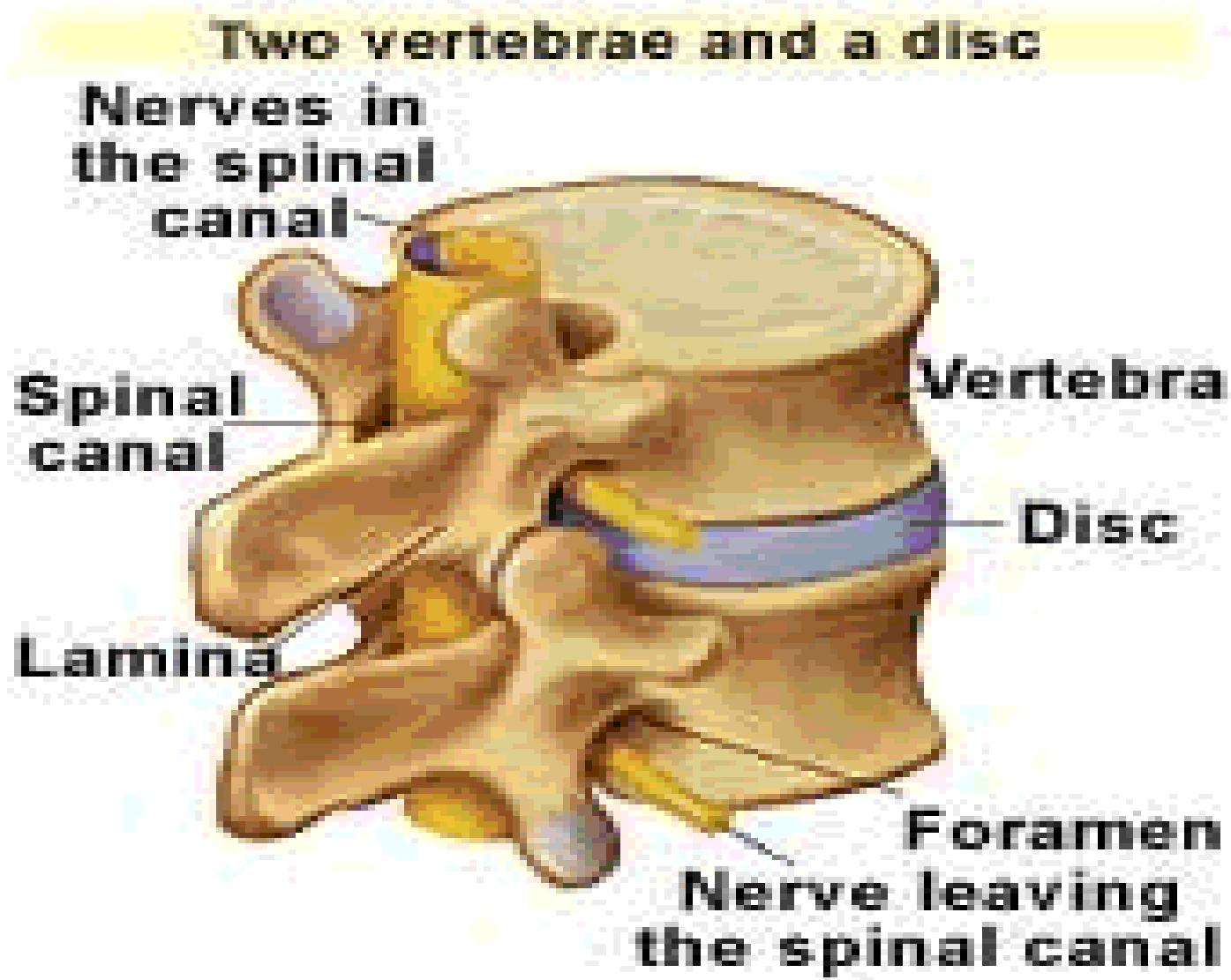
Axial Skeleton



Appendages of the Skeleton



Vertebrae and discs



Fish – Chondroichthyes

Cartilaginous fish

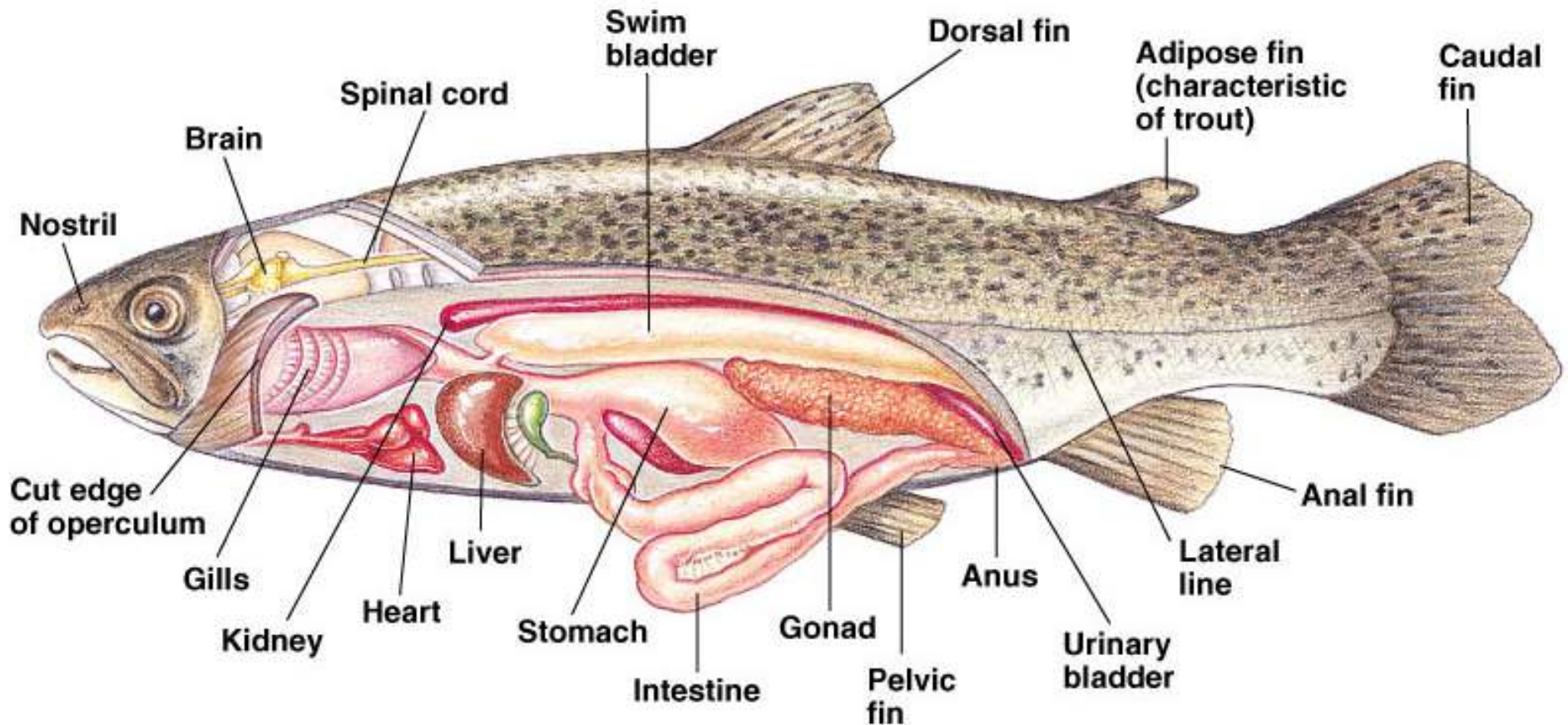


Fish – Osteoichthyes

Boney Fish



Basic Fish Body Structure



Pre AP Biology

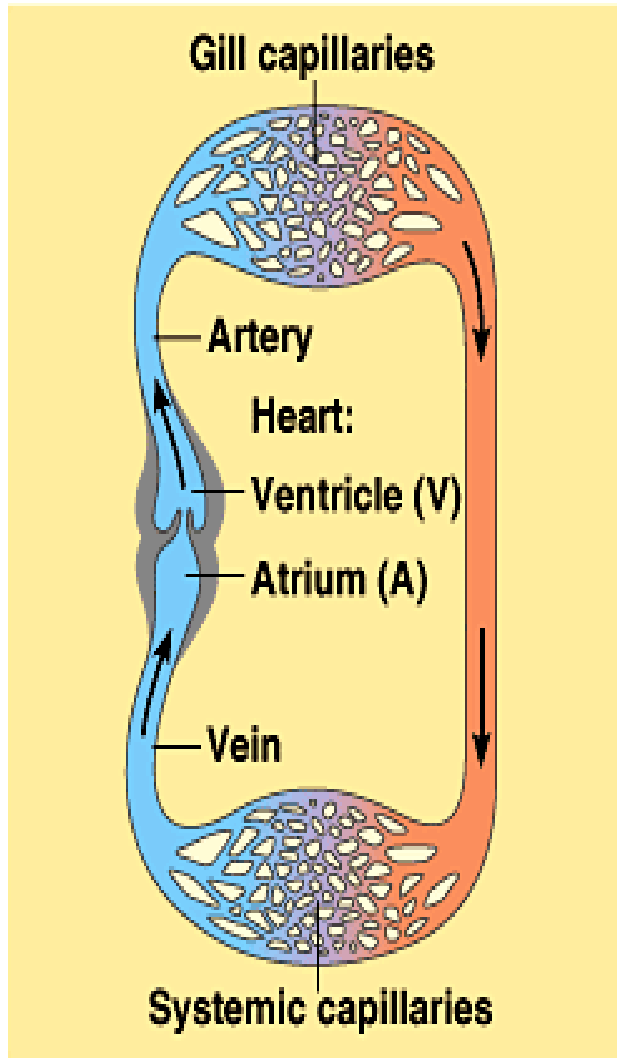
Animal Kingdom Vertebrates (8.15)

Part 2

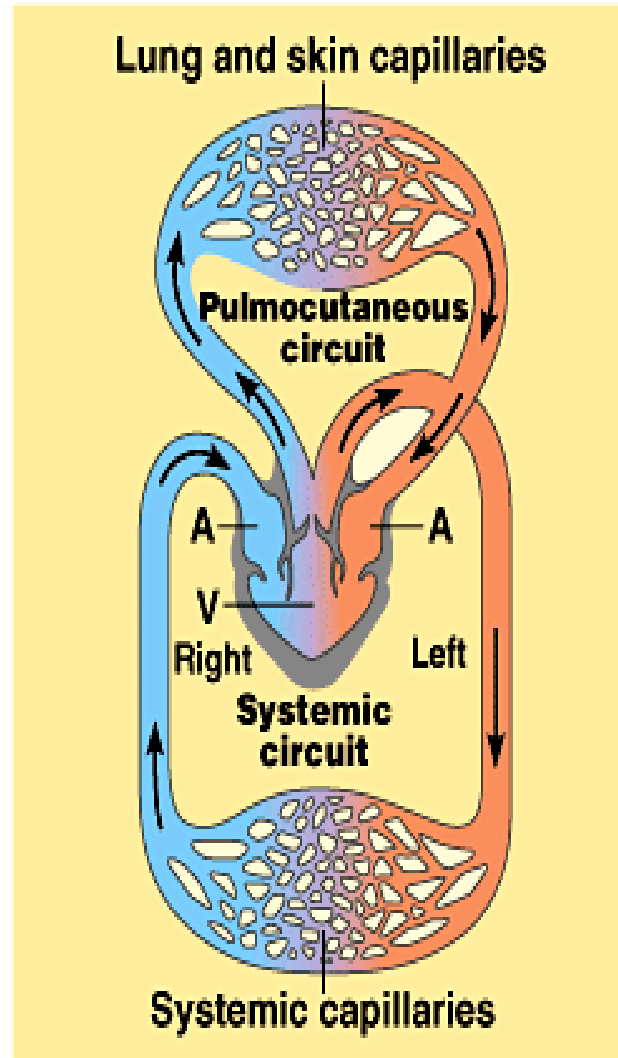
Amphibians



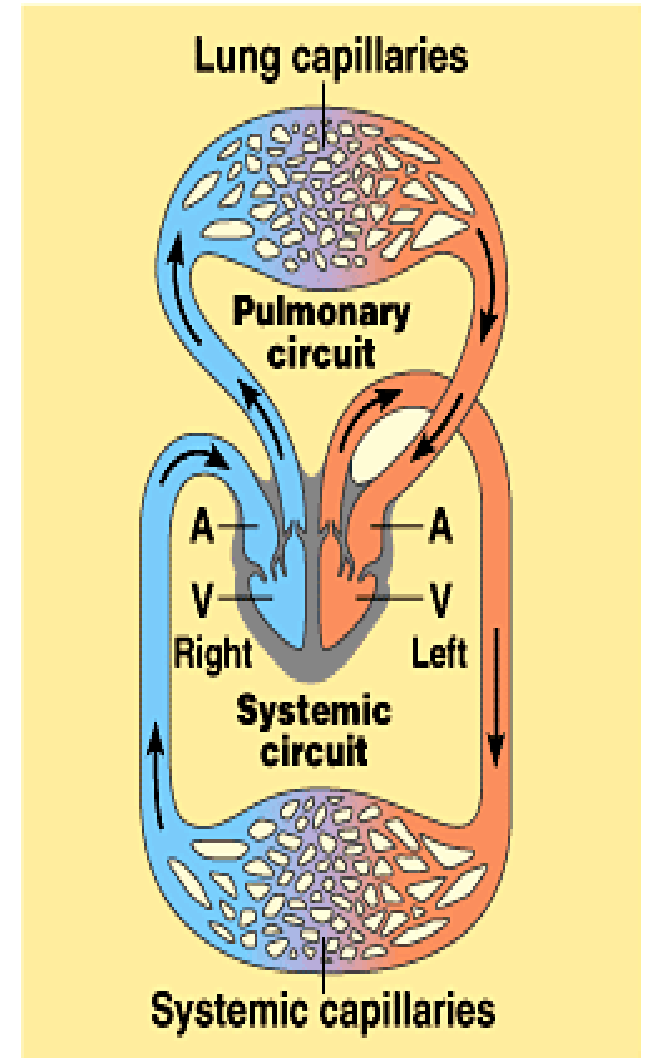
Three Chambered Heart



(a) Fish



(b) Amphibian

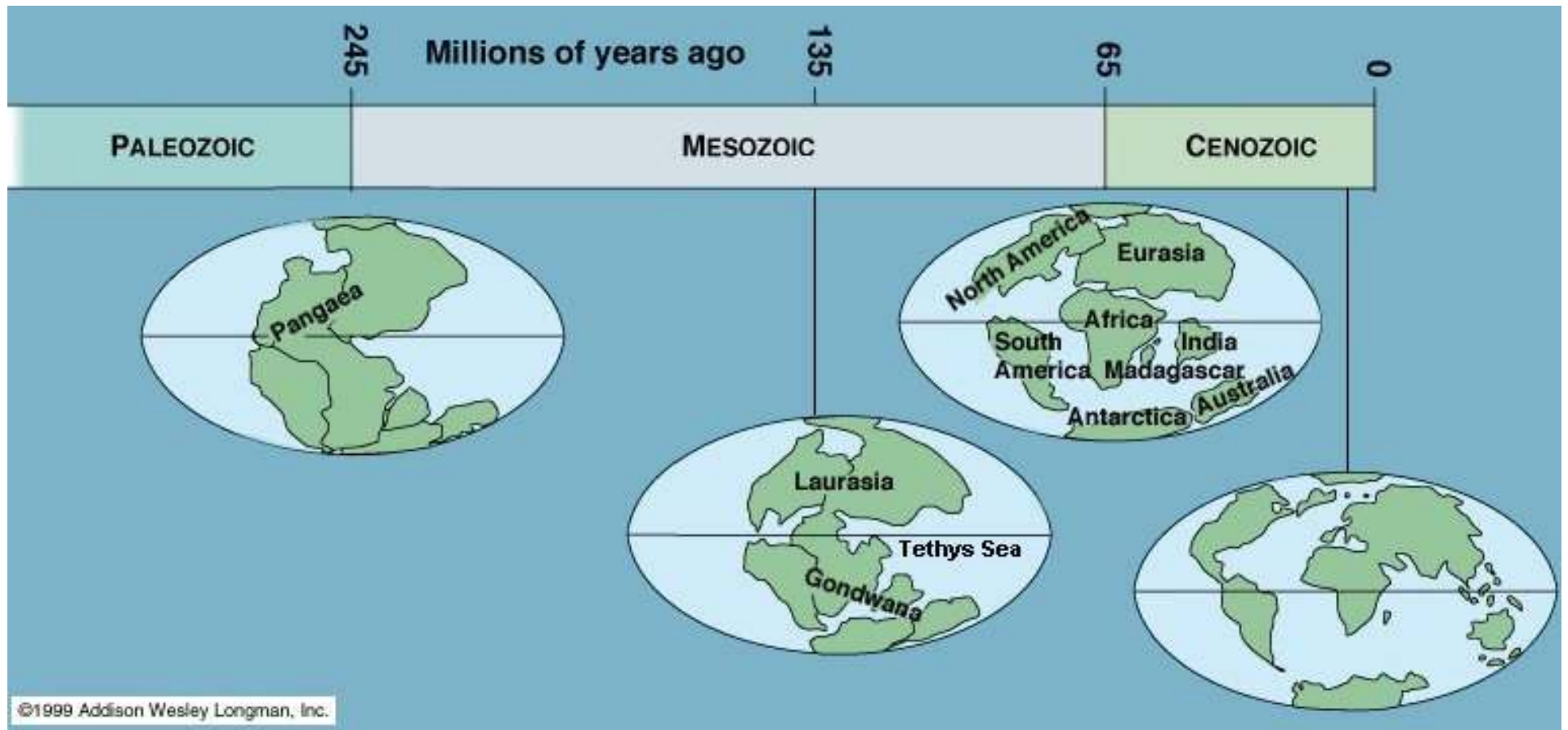


(c) Mammal

Reproduction and Metamorphosis



Pangaea



Urodela



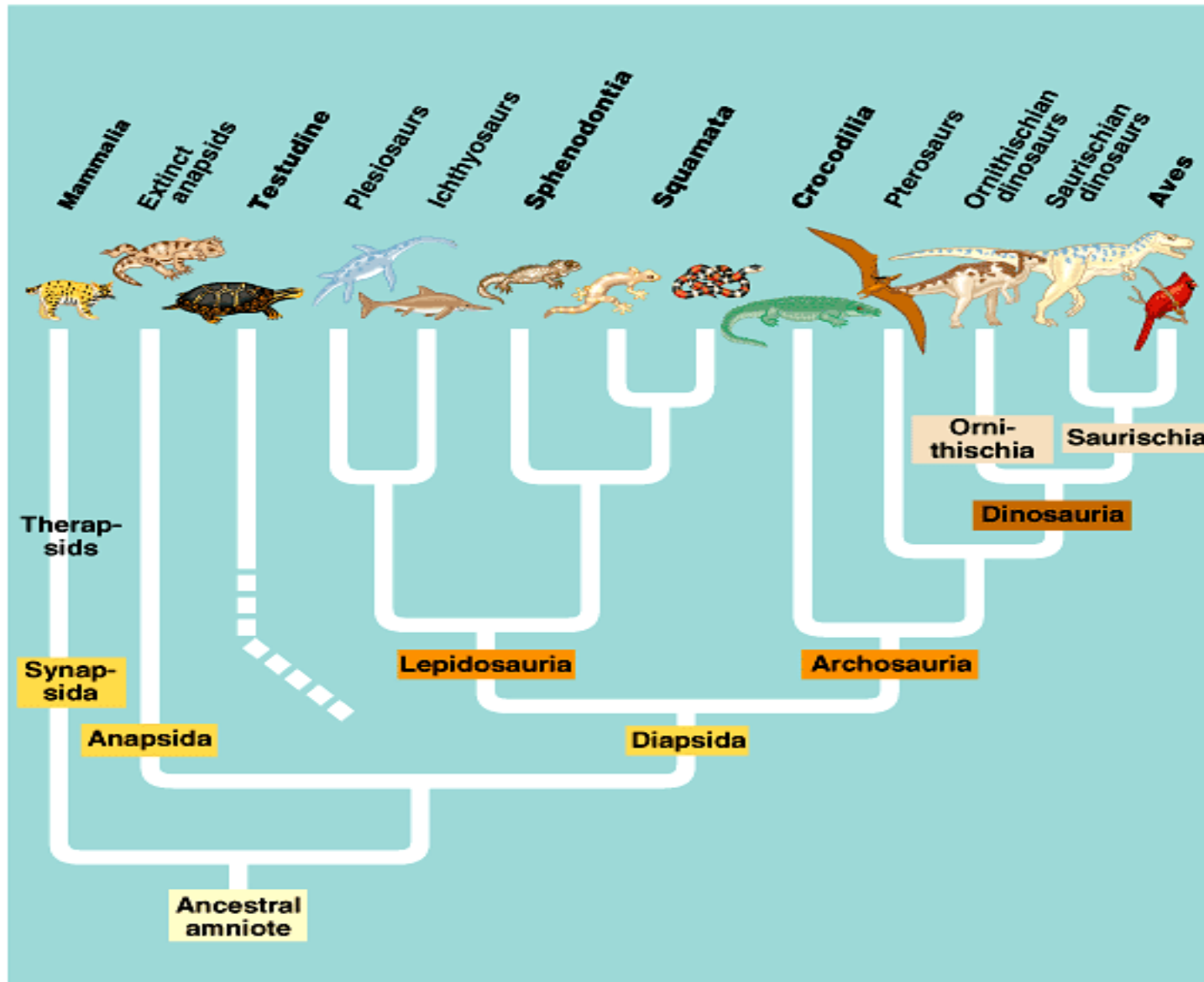
Anuran



Apodan

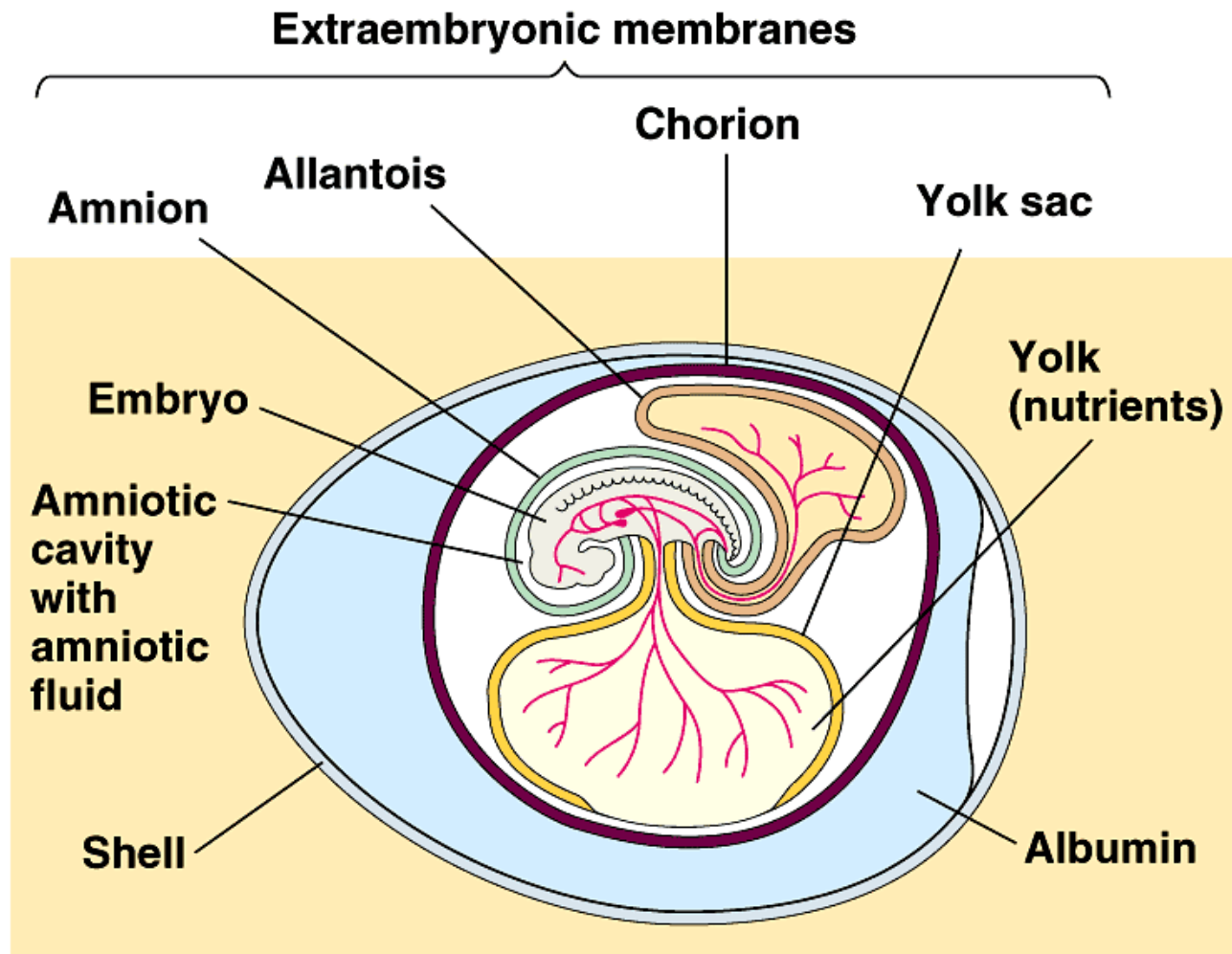


Amniote Evolution



Amniotic Egg Structure

Self contained *water* inside



Pre AP Biology

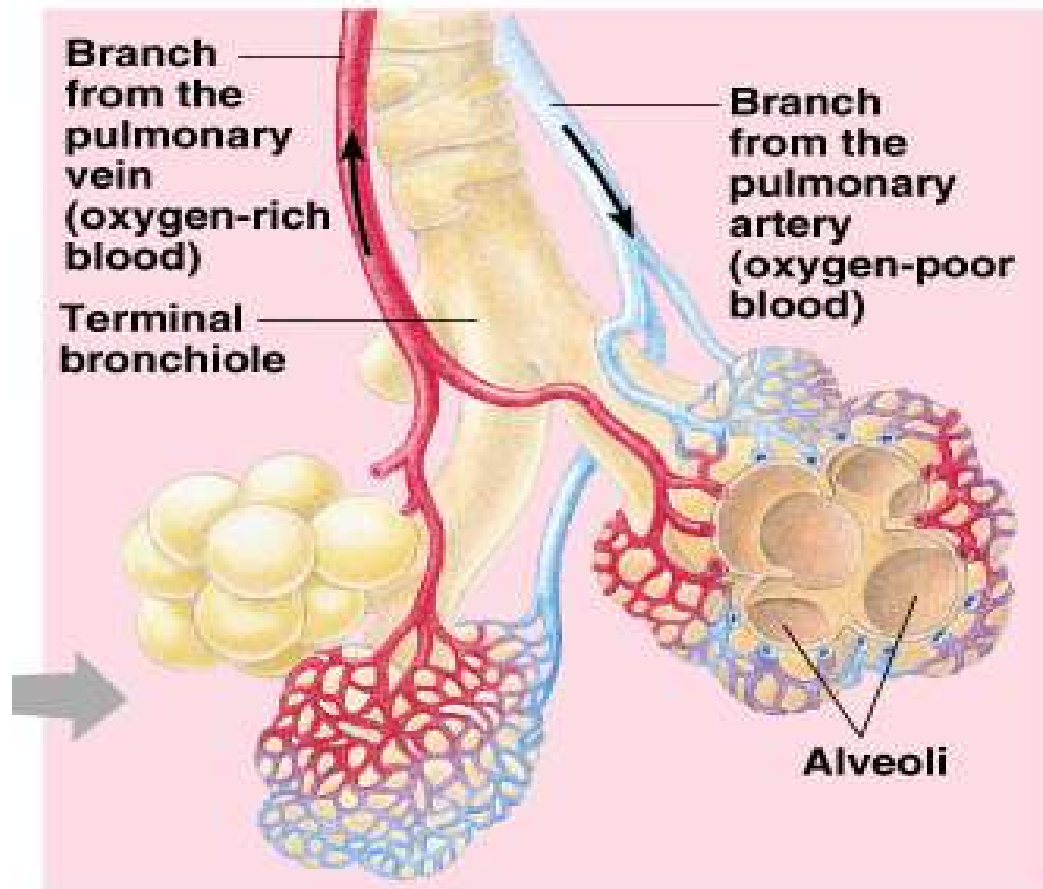
Animal Kingdom Vertebrates (8.15)

Part 3

Reptiles

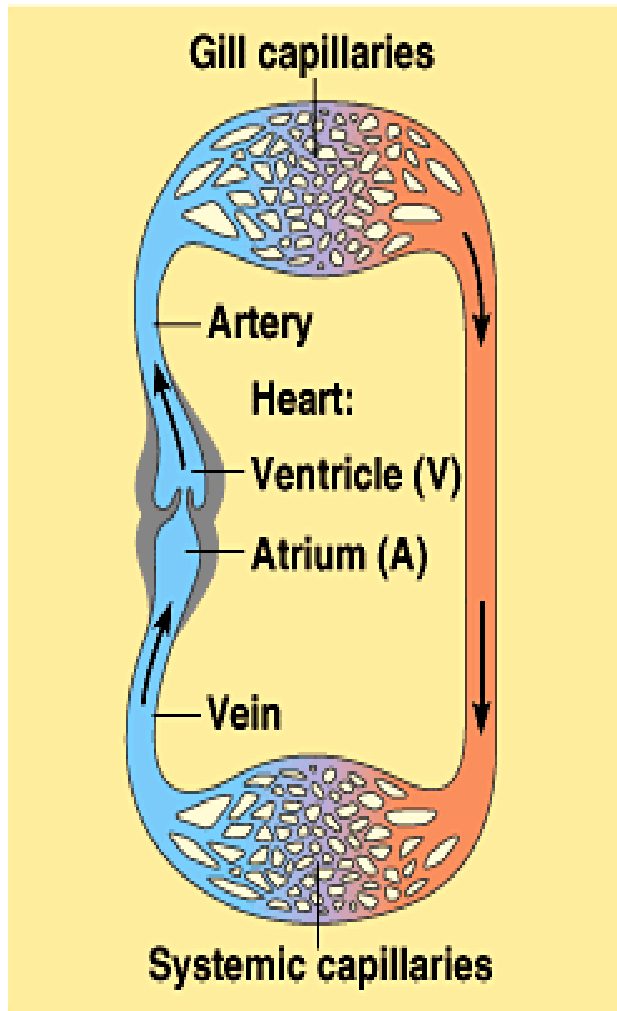


True Internal Lungs

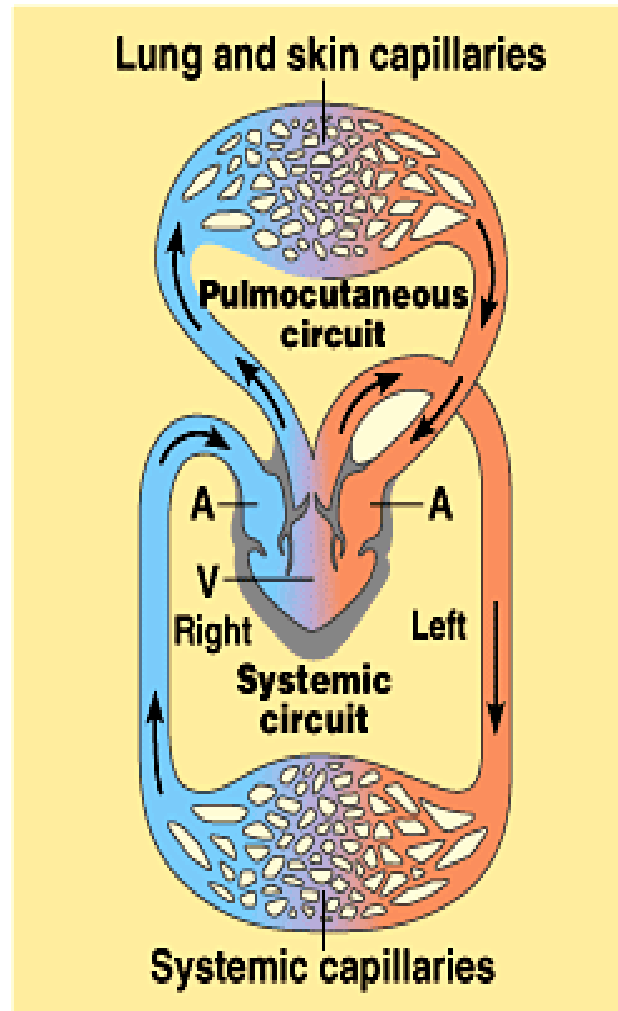


Most Reptiles have a Three Chambered Heart

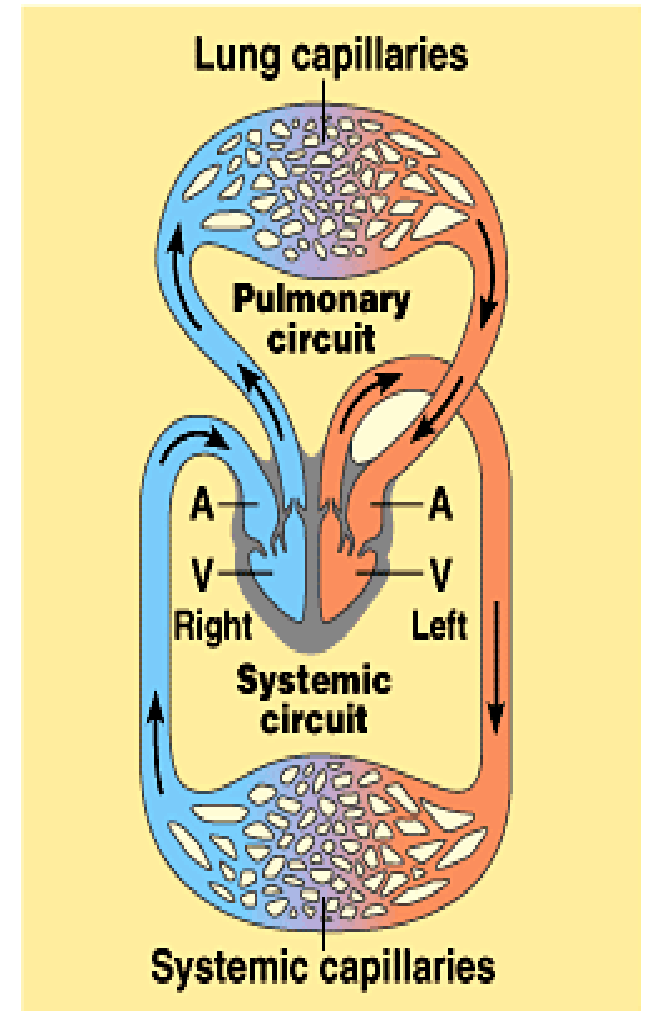
Birds have four chambers



(a) Fish



(b) Amphibian

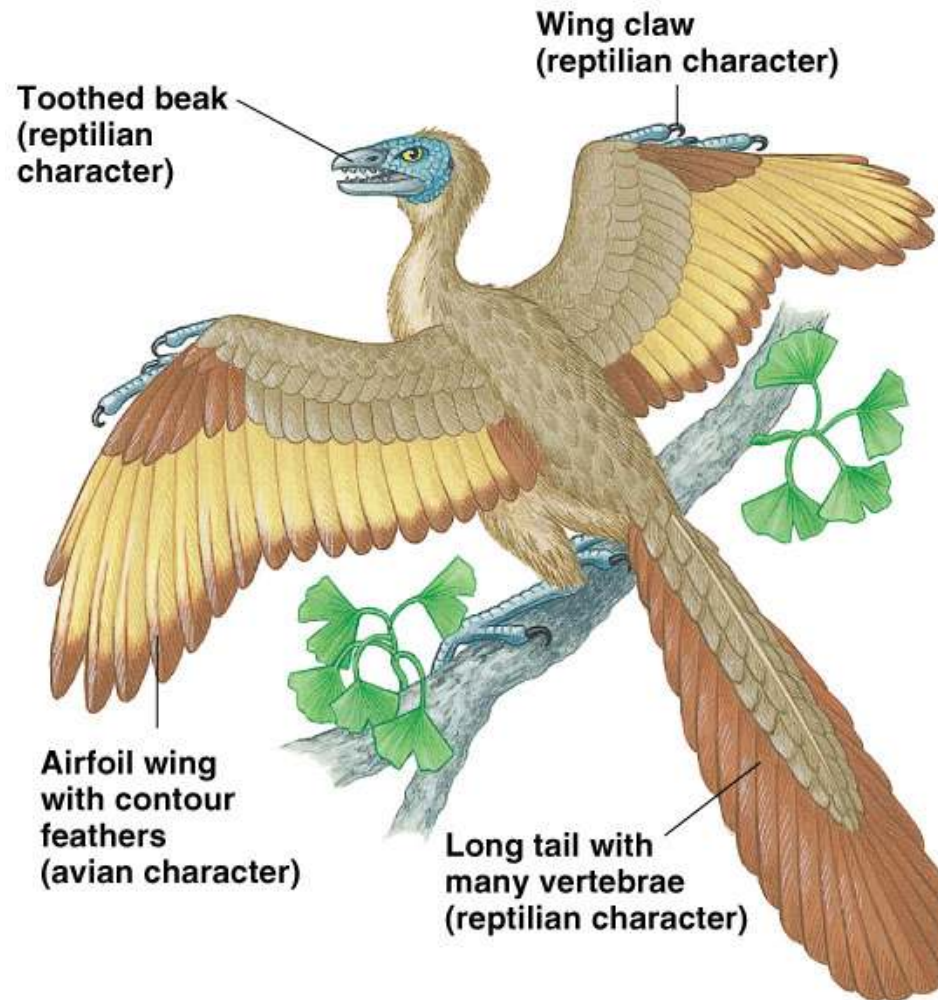


(c) Mammal

Reptile - Aves



Archaeopteryx – Dino bird



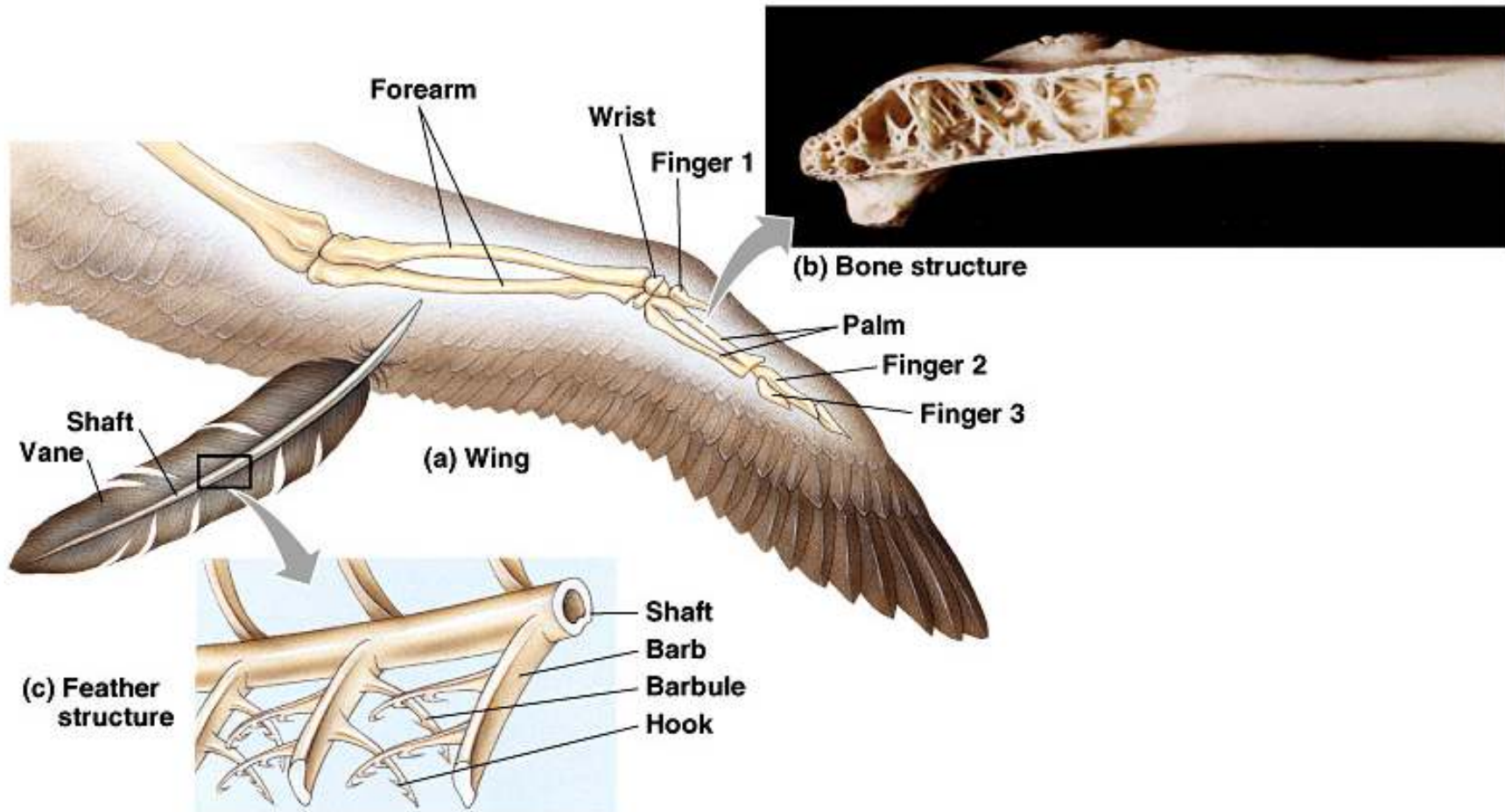
Fossil of Archaeopteryx



Scales on the feet



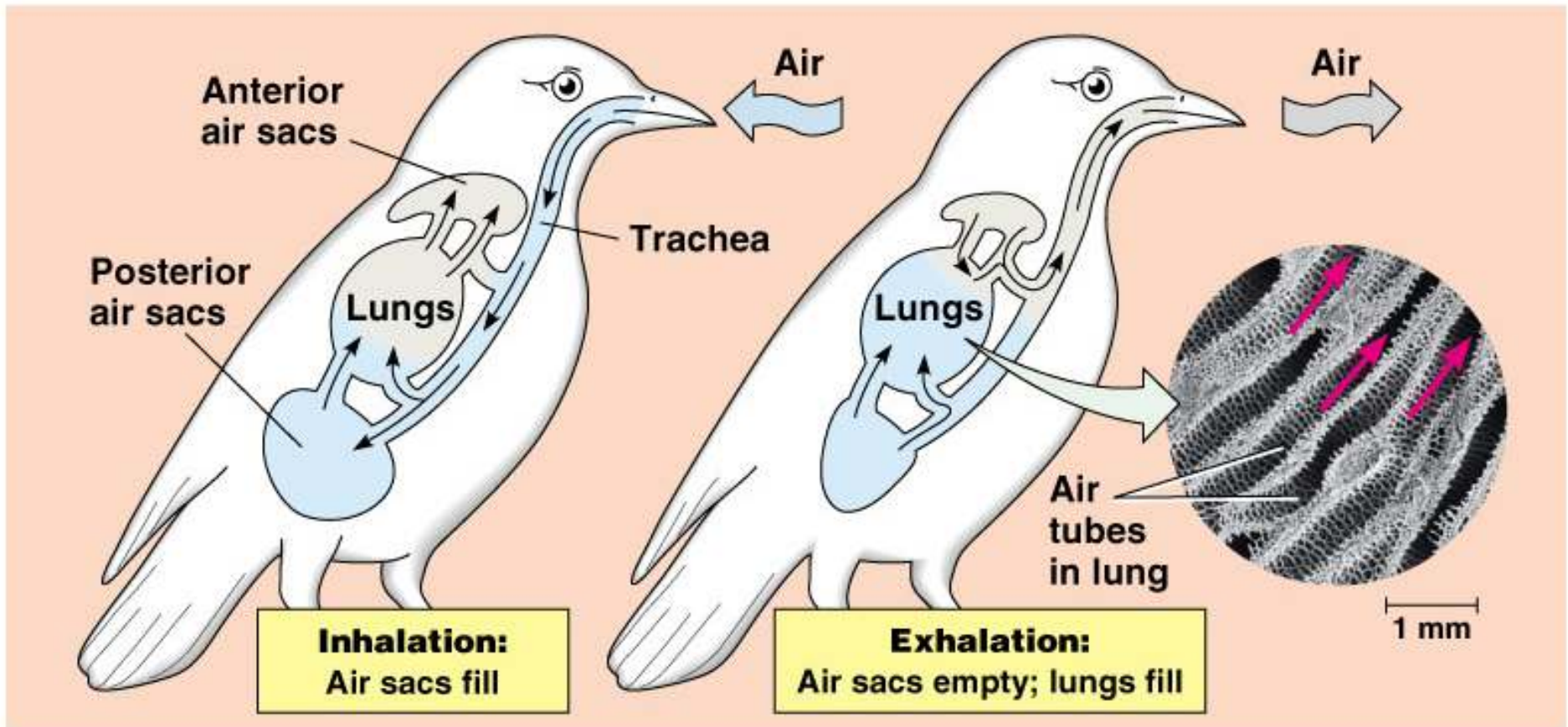
Hollow Bones and Feathers



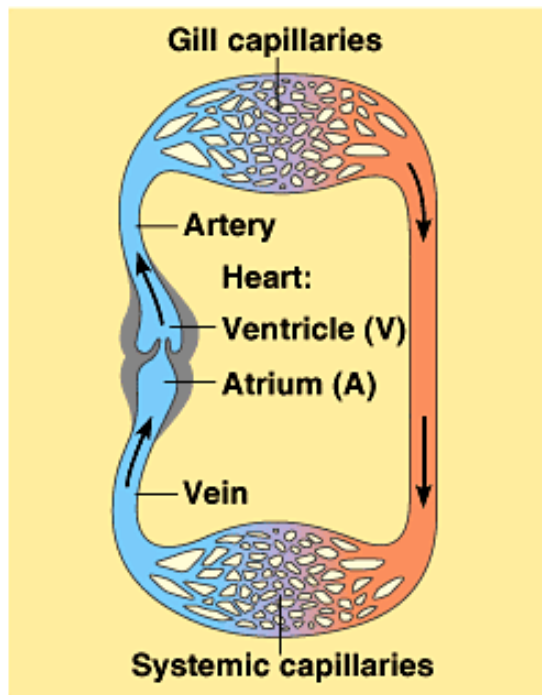
Toothless Beaks



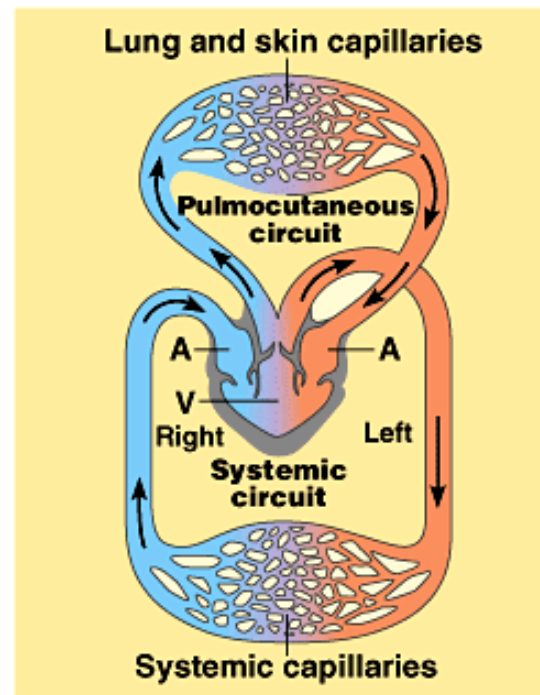
Secondary Air sacs



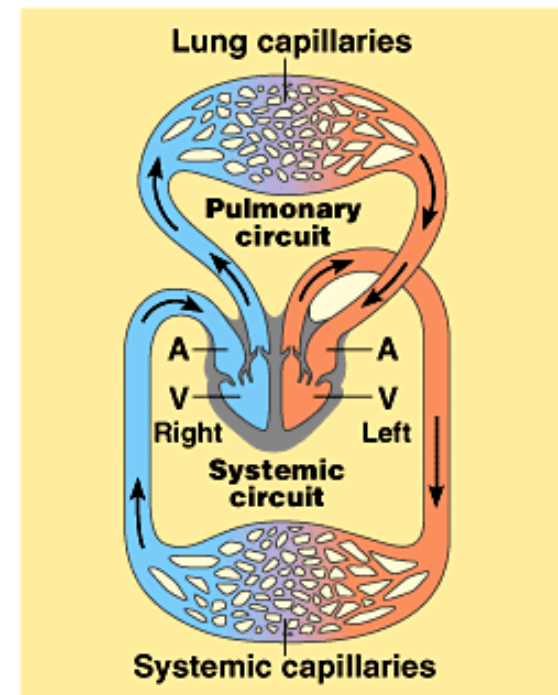
Four Chambered Heart



(a) Fish



(b) Amphibian



(c) Mammal

Ratites



Carinates - Passeriforms



Carinates - Raptor



Copyright © Pearson Education, Inc., publishing as Benjamin Cummings.

Pre AP Biology

Animal Kingdom Vertebrates (8.15)

Part 4

Mammals



Echidnas



Benjamin
L. Cummings

Marsupials of Australia



Marsupial of North America - Opossum



Placentals



Placental - humans

