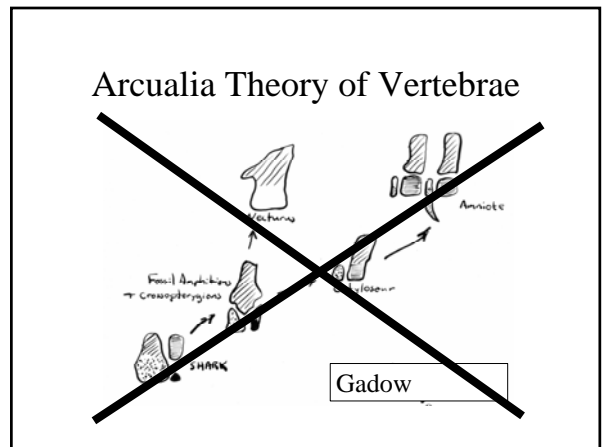
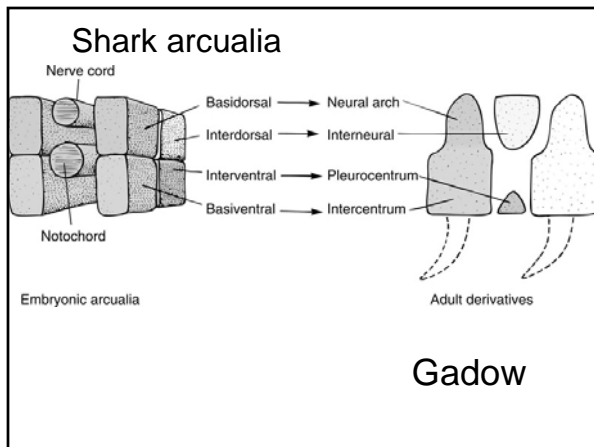
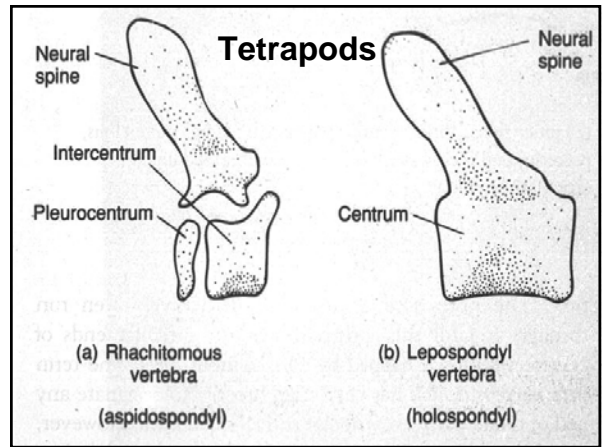
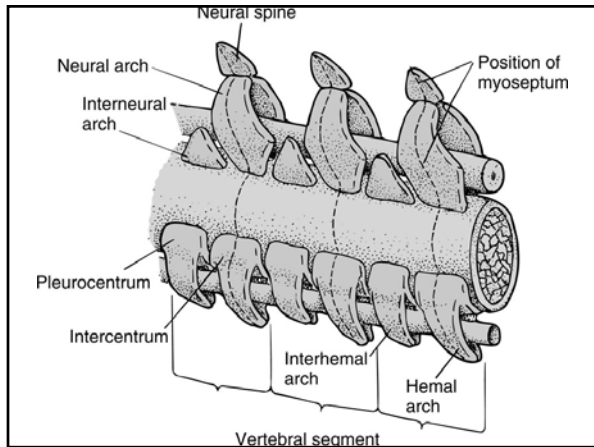
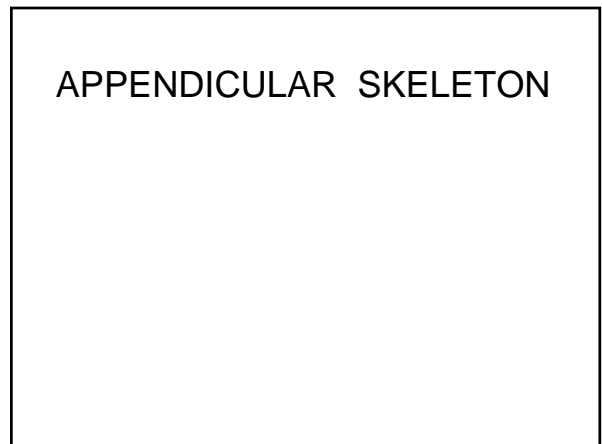
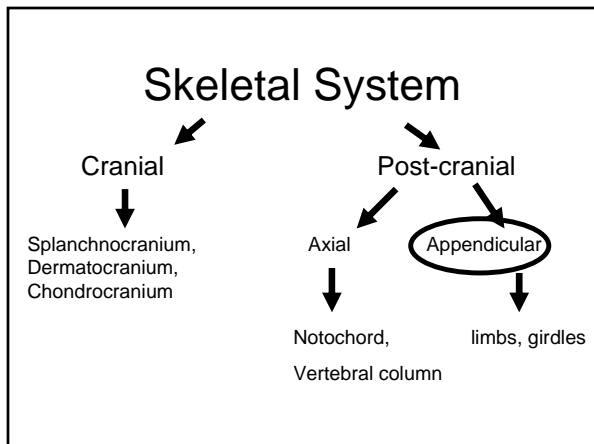
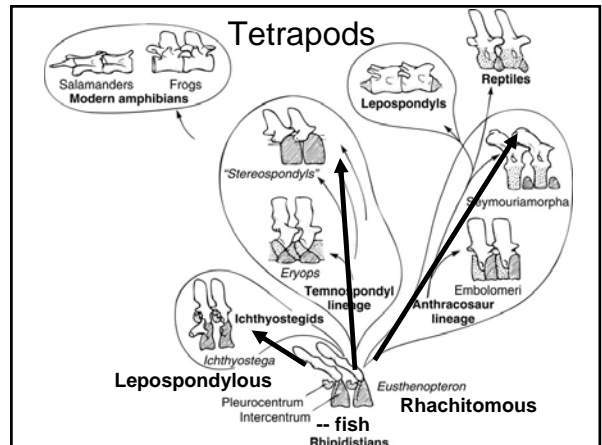
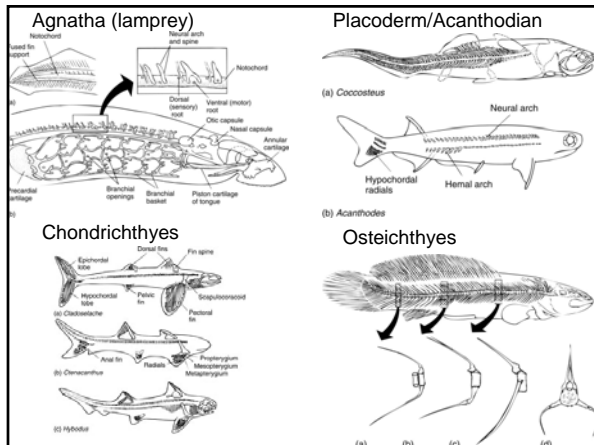
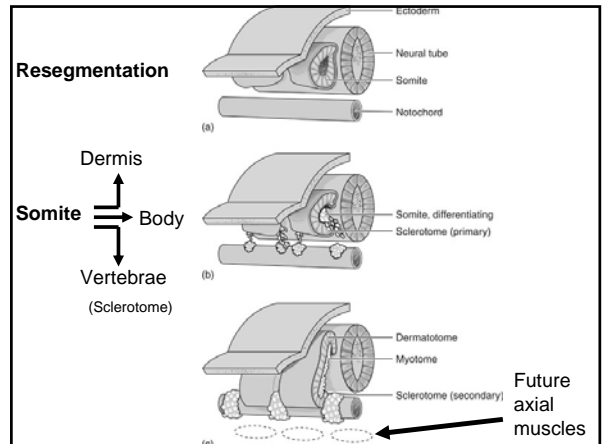
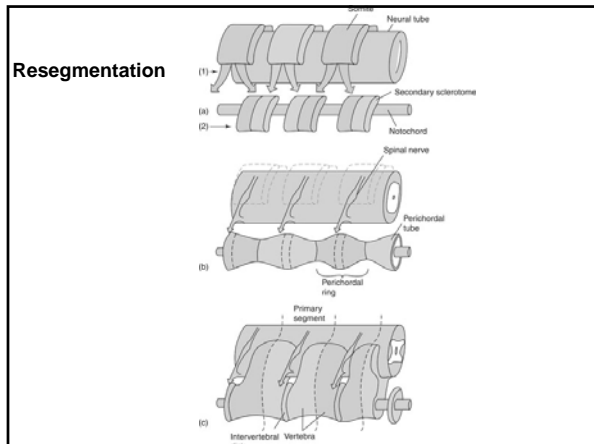
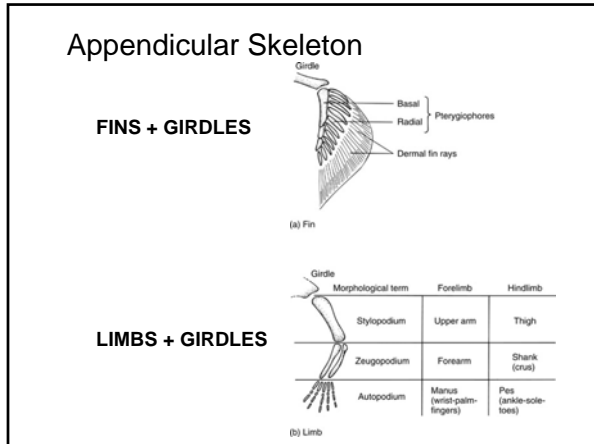


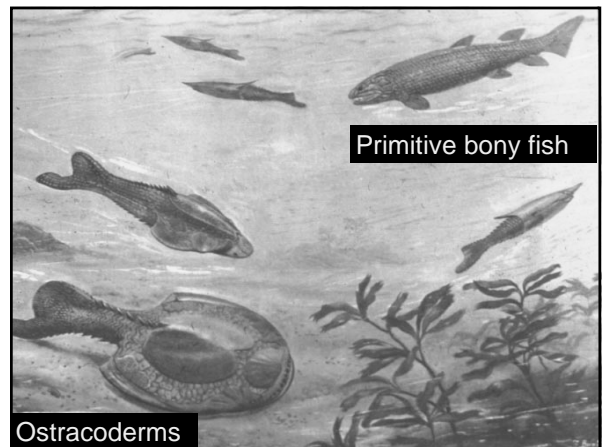
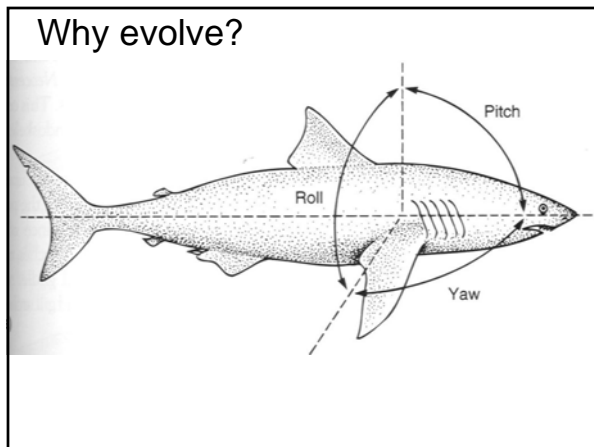
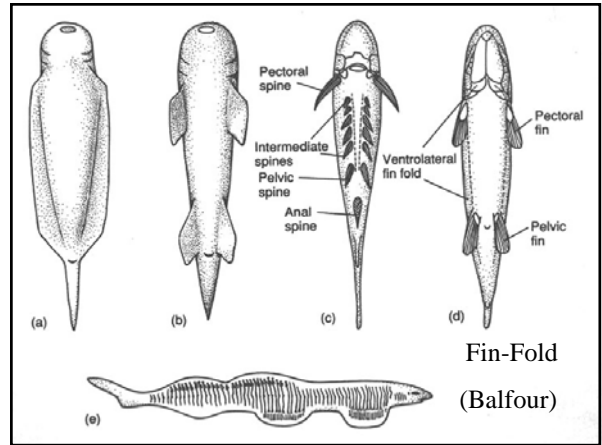
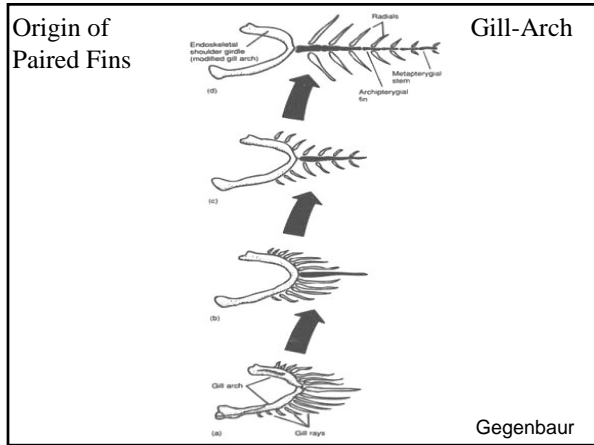
AXIAL SKELETON

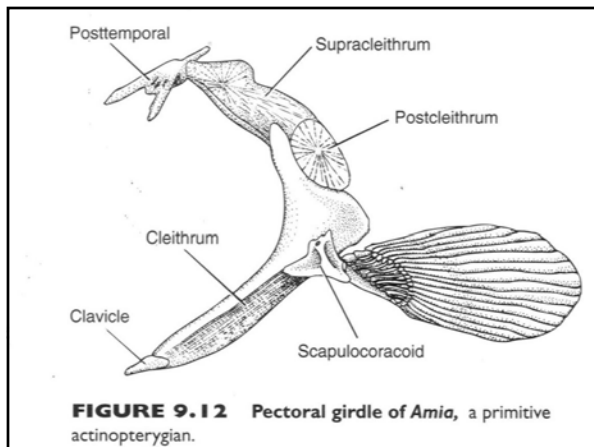
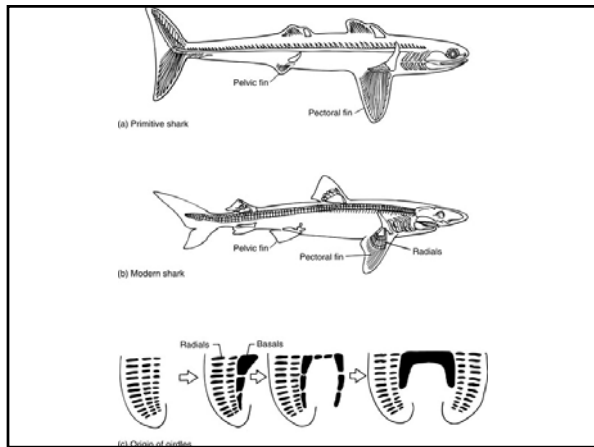




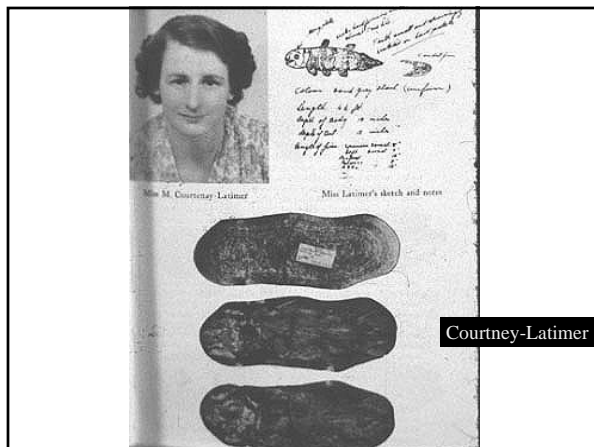
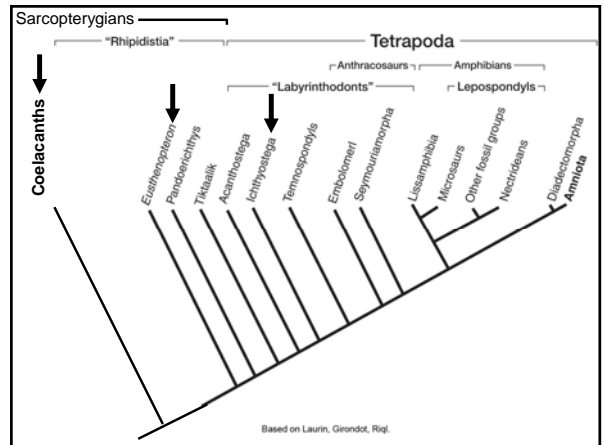
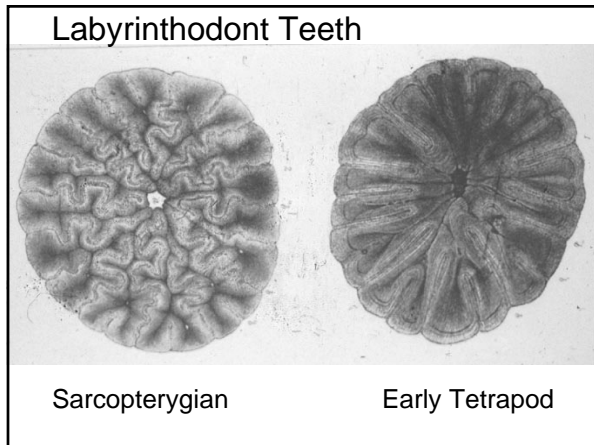
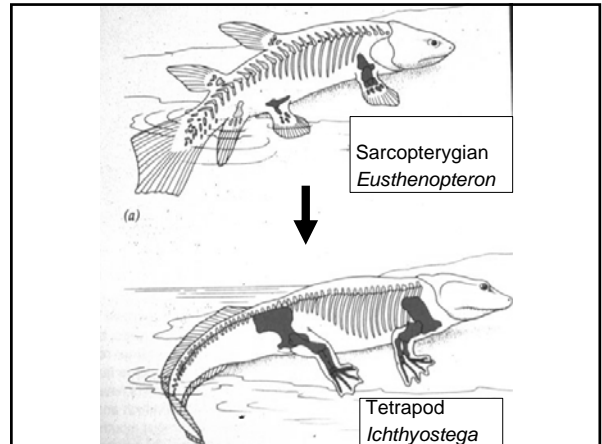
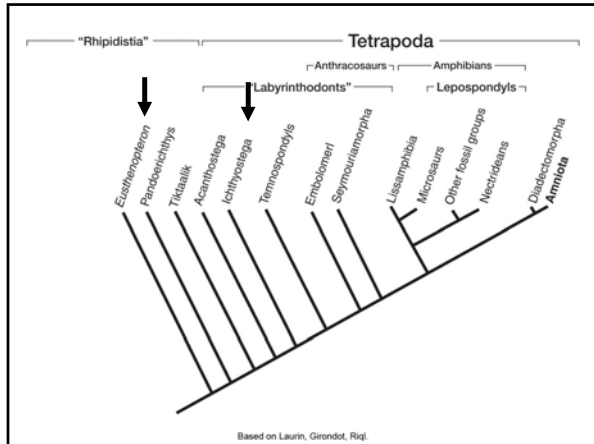


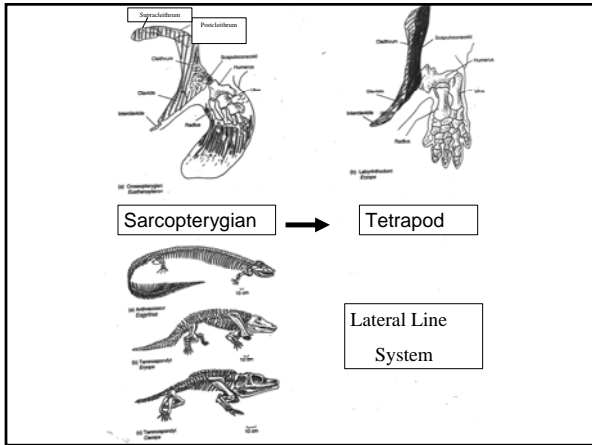
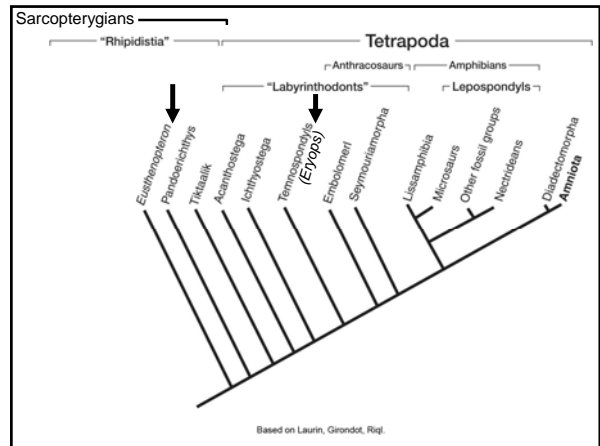
Finless → Fins





Fin → Limb

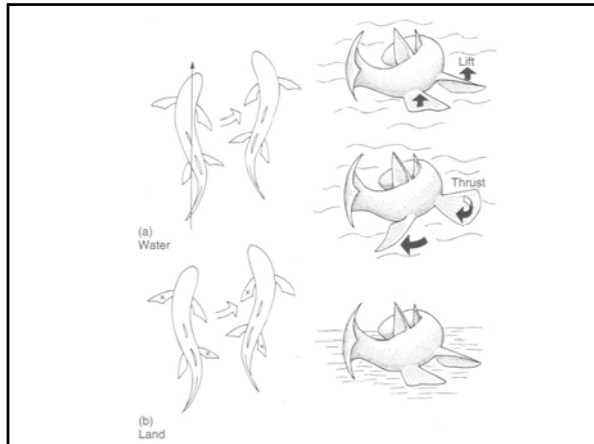




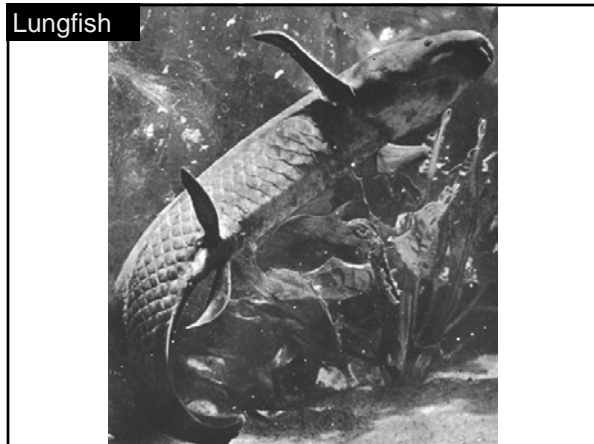
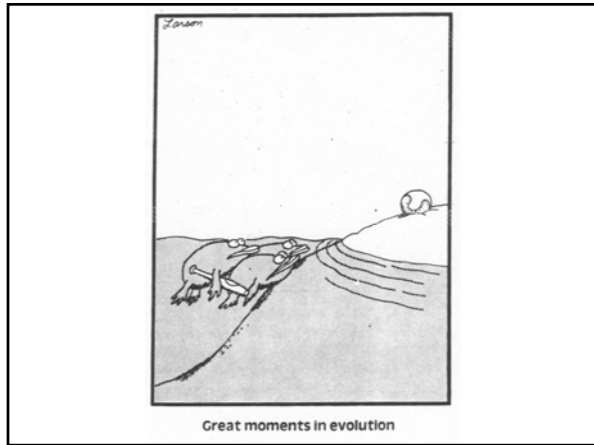
- Pectoral Girdle of Dual Origin
 - a) **endochondral component**--basal fin elements
articulation of fin/limb
attachment of musculature
 - b) **dermal component**—dermal armor
brace & support
- Other Systems change as well

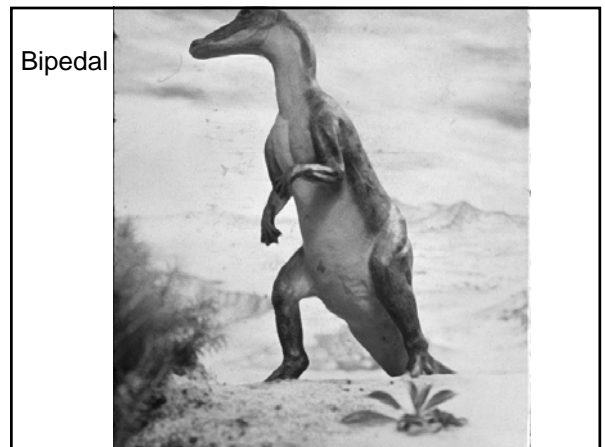
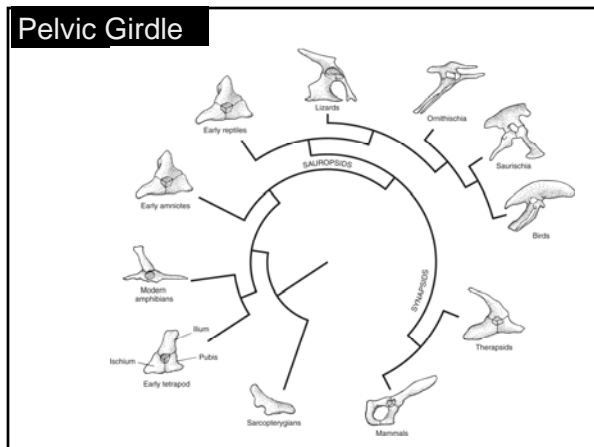
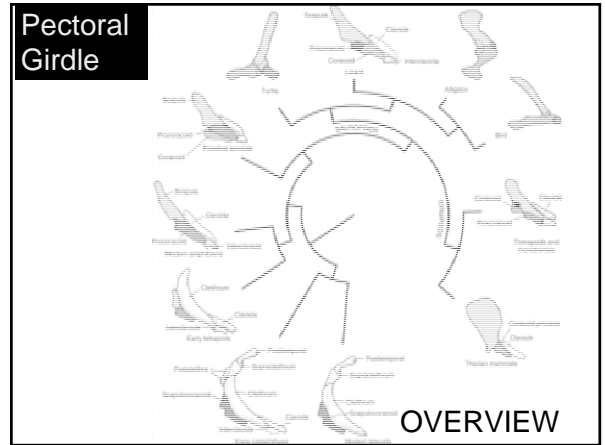
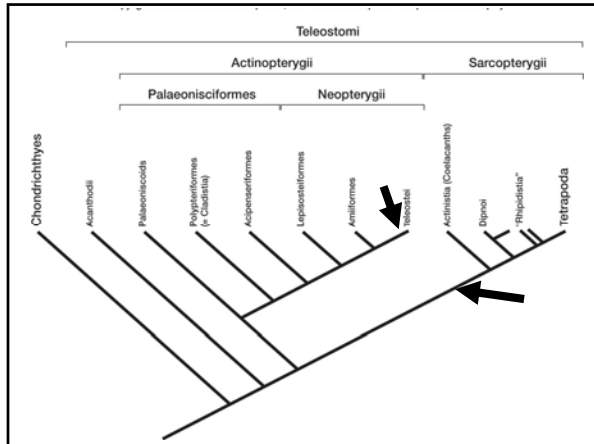
- Pectoral Girdle of Dual Origin
 - a) **endochondral component**--basal fin elements
articulation of fin/limb
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 - b) **dermal component**—dermal armor
brace & support
- Lobe-fins Preadapted → Limbs
 - feature has necessary form and function *before* environment experienced
 - fortuitous
 - immediate selective advantage

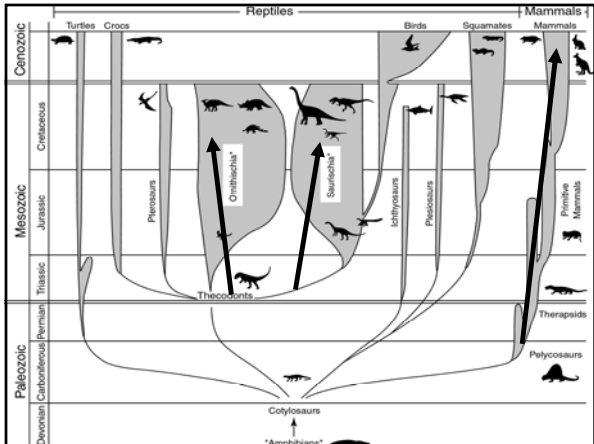
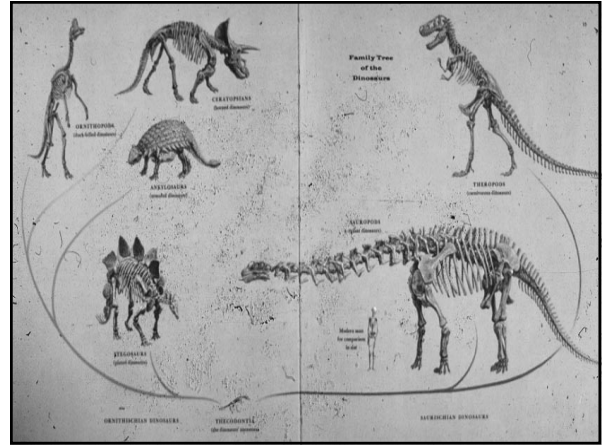
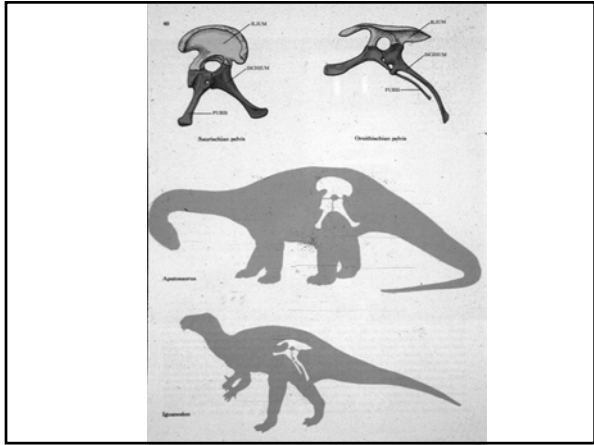
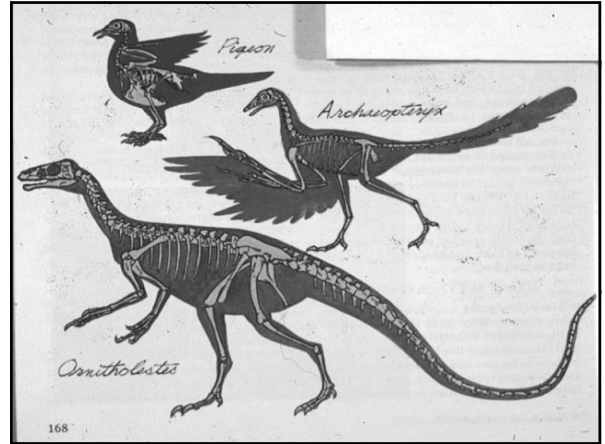
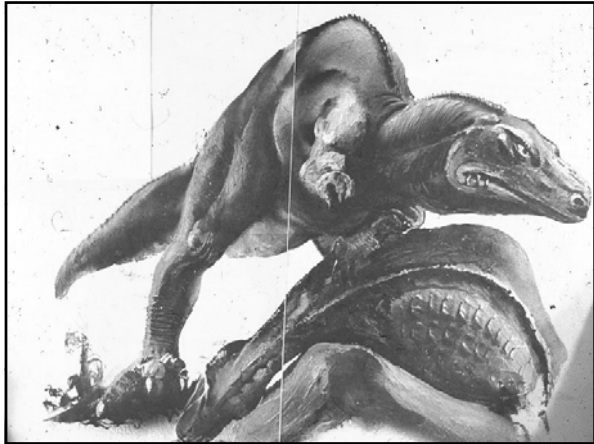




- Pectoral Girdle of Dual Origin
 - a) **endochondral component**--basal fin elements
 - articulation of fin/limb
 - attachment of musculature
 - b) **dermal component**--dermal armor
 - brace & support
 - Lobe-fins Preadapted → Limbs
 - feature has necessary form and function *before* environment experienced
 - fortuitous
 - immediate selective advantage
 - Why move to land??
 - stay in the water [but aestivate]
 - escape predation
 - other
- Gary Larson →







Synsapsids

Therapsid

obturator foramen

Modern Mammal

pubis reduced + obturator

- Excavation
- Orientation
- Pubis reduced