

Phylum Chordata		Craniates		Sarcopterygii	
Lancelets	Cephalochordata	chordates with a head		lobe-finned fishes	
Tunicates	Urochordata	Have:		Lungfish	
		skull, brain, eyes and other sense organs, high metabolism			
Chondrichthyans		Example:		Tiktaalik	
jawed cartilaginous fishes		Hagfishes	Myxini	an ancient sarcopterygian and tetrapod	
sharks and stingrays					
		Reptiles		Amphibians	
Gnathostomes		derived characters:		simple eggs with the embryo surrounded by a jelly coat	
vertebrates with a jaw		scales for waterproof		amniotes	
like sharks!		shelled eggs on land		tetrapods with amniotic eggs	
		lepidosaurs			
tetrapods		lizards and snakes		Mammalia	
sarcopterygians with limbs		archosaurs		mammals	amniotes with hair
Need:		crocodillians, dinos, bird, turtles		derived characters:	
4 limbs with digits				mammary glands	
neck for separate movement of head		Vertebrates		hair	
fusion of pelvic girdle to backbone		craniates with a backbone		high	endothermy
ears for airborne sounds		have vertebrae		metabolic	
		Example:		rate	
Dinosauria		Lampreys	petromyzontida	large brain	
Ornithischia	bird hipped, herbivores			different teeth	
Saurischia	lizard hipped	Osteichthyans		main groups	
	herbivores- sauropods	gnathostomes with bony endoskeletons		Monotremes	platypus, BASAL MAMMAL TAXA, still lay eggs
	carnivores- theropods	bony fishes!!		Marsupials	dont lay eggs, embryo connected to placenta then to pouch.. kangaroos!
	birds	actinopterygii		Eutherians	most mammals
Aves	birds	ray-finned fishes			
	forelimbs into wings	yellowfin tuna, seahorse			
	keratinized feathers				
	hollow skeletons				
	no teeth				