

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