

Cladogram of Chordates

1. Write “yes” or “no” to indicate how certain features distinguish each subphylum of chordates. The first row is completed as an example.

	Vertebrae	Jaws and Paired Appendages	True Bone	Lungs	Four Limbs	Amniotic Egg	Endothermic
Nonvertebrate chordates	No	no	no	no	no	no	no
Jawless fishes							
Sharks and their relatives							
Bony fishes							
Amphibians							
Reptiles							
Birds							
Mammals							

2. Create a cladogram showing the relationship between each of the chordates above. Include all of the following traits: *vertebrae*; *jaws and paired appendages*; *true bone*; *lungs*; *four limbs*; *amniotic egg*; *endothermic*.