

WHY CLADISTICS: KEY

1. Best current scientific method for reconstructing evolutionary relationships.
2. A method of determining evolutionary relationships of organisms.
3. Biological: origin of birds; Geographic: distribution of animals
4. Uses distribution of features (shared derived characters) to test relatedness.
5. Smaller groups contained within larger groups.
6. Backbone
7. clade [NOT “phylogenies”]; a set of shared derived characters inherited from a common ancestor.
8. More reliable and objective (than age) for determining relationships.
9. Earliest birds evolved into *Deinonychus* and *Velociraptor*.
10. A *Deinonychus*-like animal evolved into birds, then later evolved into dromaeosaurs.
11. Hypothesizes which organisms are most closely related (most likely).
12. Provides context in which phylogenies can be placed.
13. Genetic, chemical, and behavioral characteristics.
14. Skeletal morphology.
15. Too limited (only works with one group).
16. Too widespread.
17. 20-100.
18. Specimens are re-examined carefully to see if well-enough preserved, and if characteristics are really the same.
19. Cladogram.
20. The one supported by the greatest number of characteristics.
21. It is subject to further scientific testing and possible revision; it’s never final.
22. Those which define larger groups; thought to have evolved earlier.
23. Those shared by smaller groups; they evolved later.
24. Dinosauria (all dinosaurs and birds).
25. All vertebrates (unique to dinosauria).
26. Dinosauria (evolved earlier).
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