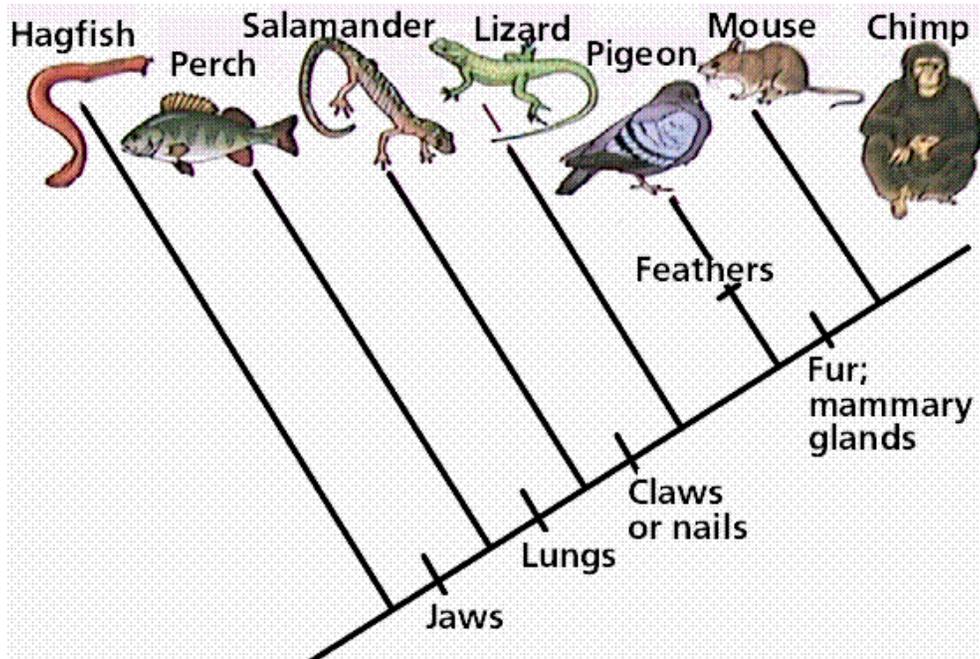


Cladograms

What is a cladogram? It is a diagram that depicts evolutionary relationships among groups. It is based on **PHYLOGENY**, which is the study of evolutionary relationships. Sometimes a cladogram is called a phylogenetic tree.

Derived characteristics are traits shared by the members of a group of organisms with many similarities.



1. How many derived characteristics are represented on the diagram above? _____
2. Which animals have claws or nails? _____
3. Which animals have jaws? _____
4. How many derived characteristics separate hagfish from chimps and what are they?

5. Which derived characteristic(s) do salamanders and mice have in common?

6. Which derived characteristics do pigeons and lizards have in common?

7. Which two organisms are more closely related hagfish and perch or perch and lizards?

8. Which two organisms are more closely related lizards and pigeons or mice and chimps?

Study the cladogram below and look at the dendrogram next to it, both illustrate the same information:

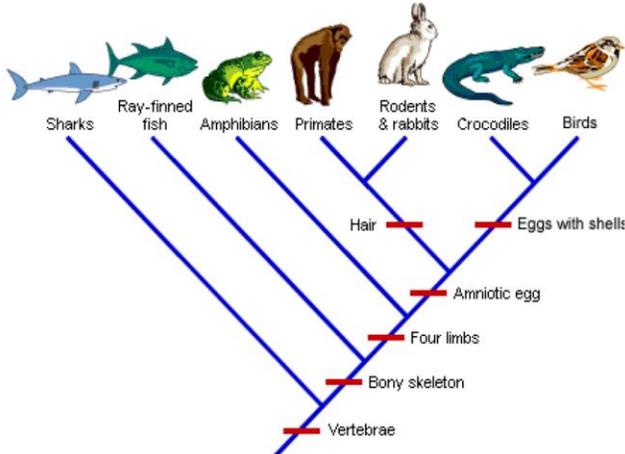


IMAGE A

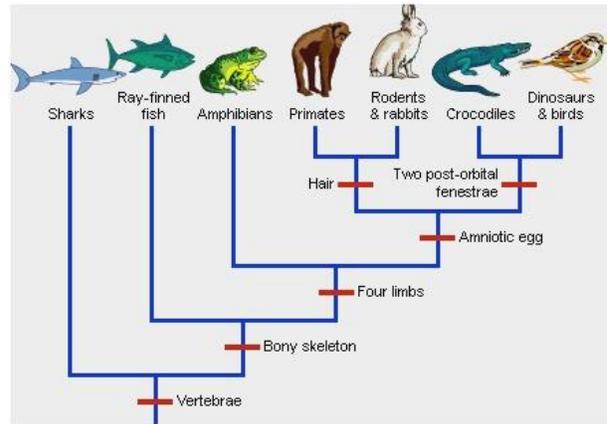
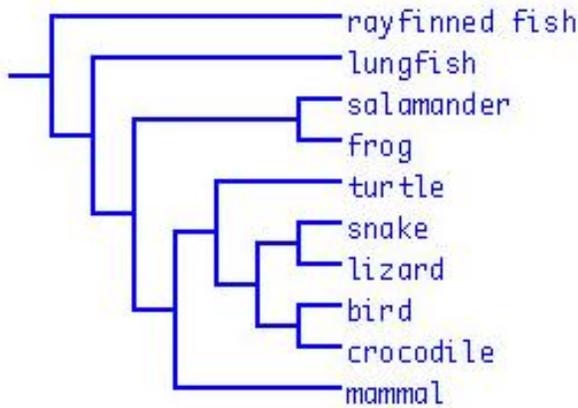


IMAGE B

9. Which of these images, A or B, do you find easier to read? _____

Study the dendrogram below and answer the questions that follow:



10. Which organism is more closely related to the snake, the turtle or the lizard? _____

11. Which organism is more closely related to the frog, the lungfish or the turtle? _____

12. Which organism would have DNA the most similar to the bird? _____