# Patterns in the History of Life

Go to this website; http://evolution.berkeley.edu/evolibrary/article/0_0_0/evo_03 . Answer the questions below and follow the directions on the website. Make sure you answer all the questions. REMEMBER SOMETIMES THERE ARE TWO QUESTIONS OR MORE IN ONE!!!!

1. Different species share…
    a. Share body parts
    b. A common ancestor
    c. Similar behaviors

2. Are scientists 100% sure that a phylogenetic tree represents fact and overall truth of how organisms are related? Why or why not?

3. So on the worksheet you finished earlier… which species diverged from the tree the earliest? The latest?

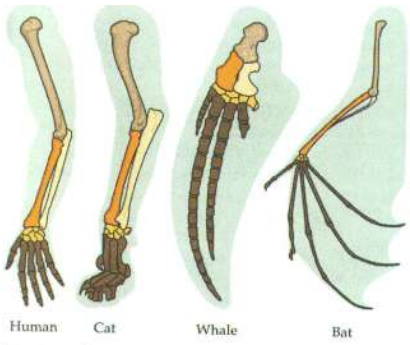
4. We organize life in the form of "family trees" now… how did they organize it in the past? Why did they organize it the way they used to?

5. What are the 3 things to keep in mind when reading a phylogeny (phylogenetic tree)?

6. What information about species do scientists use to organize a phylogenetic tree?

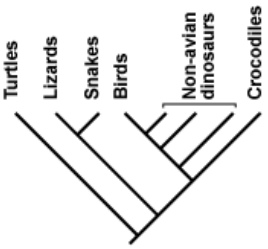
7. What does **homologous** mean? What is an example (NOT the human and mouse eye that they give!!!!)

8. Are bird and bat wings homologous? Why or why not?



9. What does **analogous** mean? Give an example of analogous structures on animals.

10. What is convergent evolution?




11. Why do biologists use phylogenetic trees?

12. What is a **clade**?

13. DESCRIBE 3 methods scientists use to figure out how old organisms are. You need more than just the word!

14. Using the timeline in the last section…

a. What happened 248 mya (million years ago)?

b. What about 360 mya?

c. 225 mya?