

# AP Biology 006 – Phylogenetics

## Video Review Sheet

[www.bozemanscience.com/006-phylogenetics](http://www.bozemanscience.com/006-phylogenetics)

1. Define phylogenetics:
2. The goal of phylogenetics tree is:
3. Define speciation:
4. Define morphological:
5. Molecular: How we use \_\_\_\_\_ to figure out who is related to whom.
6. Whenever you have a tree it suggests:
7. Morphology example: Heart – tracing it through time:
  - a. In fish: there are \_\_\_ chambers – single loop
  - b. In amphibians: \_\_\_ chambered heart. They also pick up oxygen using their \_\_\_\_\_.  
The pressure issue is no longer but the problem is that there is a \_\_\_\_\_ of blood. (Not a problem for amphibians but would be if you were more active/life on land)
  - c. Reptiles have a \_\_\_\_\_ to divide their three-chambered hearts.
  - d. Birds/Mammals probably both evolved the \_\_\_\_\_-chambered hearts independently.
8. Molecular data: using DNA – looking at the \_\_\_\_\_ code
9. Cladogram: uses a clade. Define clade:
10. Do develop a cladogram you use molecular/DNA evidence and synapomorphies. Define synapomorphies:
11. Goal is to create monophyletic groups – contains all the \_\_\_\_\_