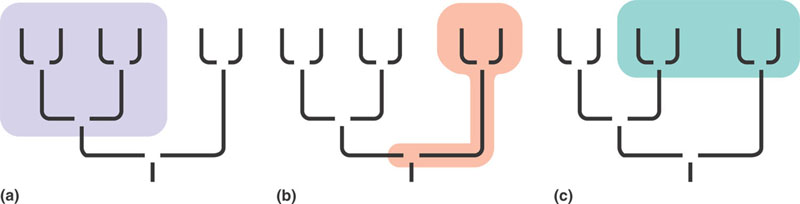
**AP Biology Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Guided Reading Chapter 26**

There are those who see the future of taxonomy abandoning the kingdom – phylum – class, etc. system altogether. This chapter introduces classifications with a greater understanding of molecular biology.

1. Define the following terms:
   1. Phylogeny
   2. Systematics
   3. Molecular systematics
   4. Homoplasies
   5. Taxonomy
   6. Binomial nomenclature
   7. Phylogenetic trees
   8. Cladogram
   9. Clade
   10. Cladistics
   11. Shared ancestral character
   12. Shared derived character
2. Use the following blank diagram to compare and explain monophyletic, paraphyletic and polyphyletic – include the definition of each term in your diagram  
     
   
3. What is the relationship between the ingroup and the outgroup in classification?
4. What does parsimony mean?
5. How is this applied to understanding evolution – what is the principle of maximum parsimony and the principle of maximum likelihood?
6. What is the concept of a molecular clock and how is it useful?
7. What domains have been agreed upon?