

Free Response Questions  
Biochemistry Test  
AP Biology  
Lindemulder

1. The unique properties (characteristics) of water make life possible on Earth. Select three properties of water and:
  - a. for each property, identify and define the property and explain it in terms of the physical/chemical nature of water.
  - b. for each property, describe one example of how the property affects the functioning of living organisms.
  
2. All life on Earth is carbon based. Our carbon basis allows for the formation of complex molecules. Pick three of the four groups of complex carbon based molecules (macromolecules) and:
  - a. For each group, discuss the structural components of the molecule group. (ex. types of bonds, functional groups present, unique structural features of that group, etc.)
  - b. For each group, discuss two examples of molecules that belong to each of the groups that you chose. Briefly describe their function. For any credit, the function must be accurately described.
  - c. All of these groups of molecules are created from monomers joining to form polymers. Explain and diagram the process that joins these molecules using one class of macromolecule as an example.