1) Label the parts of the cell below.

Golgi apparatus  
lysosome  
mitochondrion  
nucleolus  
nucleus  
rough endoplasmic reticulum (RER)  
ribosomes on rough ER  
smooth ER  
plasma membrane  
rrough endoplasmic reticulum (RER)

2) Describe briefly how each labeled answer functions.

3 a) Label the parts of the eukaryotic cell on the diagram below using the following list.

nucleus  
golgi apparatus  
mitochondrion  
cytoplasm smooth  
endoplasmic reticulum  
ribosomes on rough endoplasmic reticulum  
free ribosomes  
plasma membrane  
endoplasmic reticulum  
endoplasmic reticulum
3 b) How do prokaryotic cells differ from eukaryotic cells? (Note the prokaryotic cell is much much smaller than the eukaryotic cell but they are both drawn so that you can see and compare interanal components.)

4) Currently, scientists estimate that life first appeared on approximately ____________ years ago.

5) A key point in the theory of evolution is: slight variations among individuals significantly affect the chance that a given individual will survive in its environment and reproduce.

These variations among individuals are due to ________________.

6) Surface tension occurs in water because it has ________________.

7) The building blocks of DNA are ________________.

8) The building blocks of proteins are ________________.

9) All cells have a membrane composed of ________________.

10) In the process of glycolysis, cells make energy in the form of ________________.

11) Oxidation and ________________ occur together.

12) What is a gene?

13) The "Central Dogma" states that information flow in the cell is from DNA to __________ to __________.

14) Are the genes in your eye cells the same or different than the genes in your gut cells?

15) Are the proteins in your eye cells the same or different than the proteins in your gut cells?