

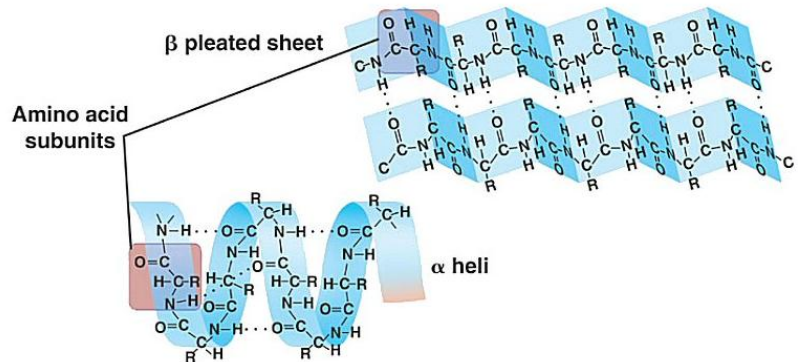
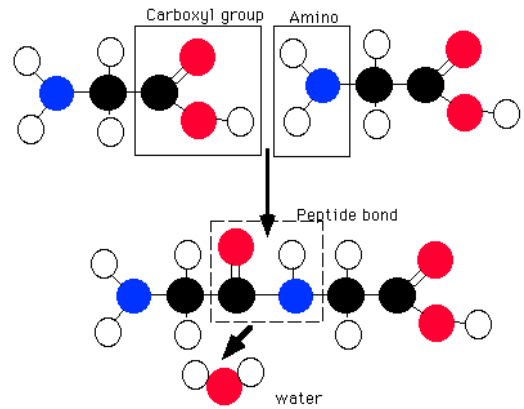
Name: \_\_\_\_\_

Date: \_\_\_\_\_ Period: \_\_\_\_\_

## Part 1

Go to: <http://www.johnkyrk.com/aminoacid.html>

- Amino acids are the \_\_\_\_\_ of proteins.
- There are \_\_\_\_\_ amino acids that regularly occur in proteins.
- Amino acids are distinguished by \_\_\_\_\_ and the chemical properties of their \_\_\_\_\_
- \_\_\_\_\_ amino acids are essential to the human diet.
- \_\_\_\_\_ bonds are created within ribosomes, one at a time linking various amino acids into a \_\_\_\_\_
- Portions of polypeptide chains readily coil into a \_\_\_\_\_.
- \_\_\_\_\_ bonds hold the helix firmly intact.
- Sections of polypeptide chains can interlock side by side in groups called \_\_\_\_\_  
\_\_\_\_\_ protrude from the sheet.
- \_\_\_\_\_ bonds hold the sheets together.



## Part 2

Go to: <http://webhost.bridgew.edu/fqorga/proteins/default.htm> and click on the link to "Amino Acids" on the menu to the left.

- One useful classification of the amino acids divides them into two groups, the \_\_\_\_\_ (or hydrophilic) amino acids have side chains that interact with water, while those of the \_\_\_\_\_ (or hydrophobic) amino acids do not.
- Another subgroup of the amino acids are those with \_\_\_\_\_ side chains. These amino acids contribute to the \_\_\_\_\_ exhibited by peptides and proteins.

Now click on the link to "Proteins"

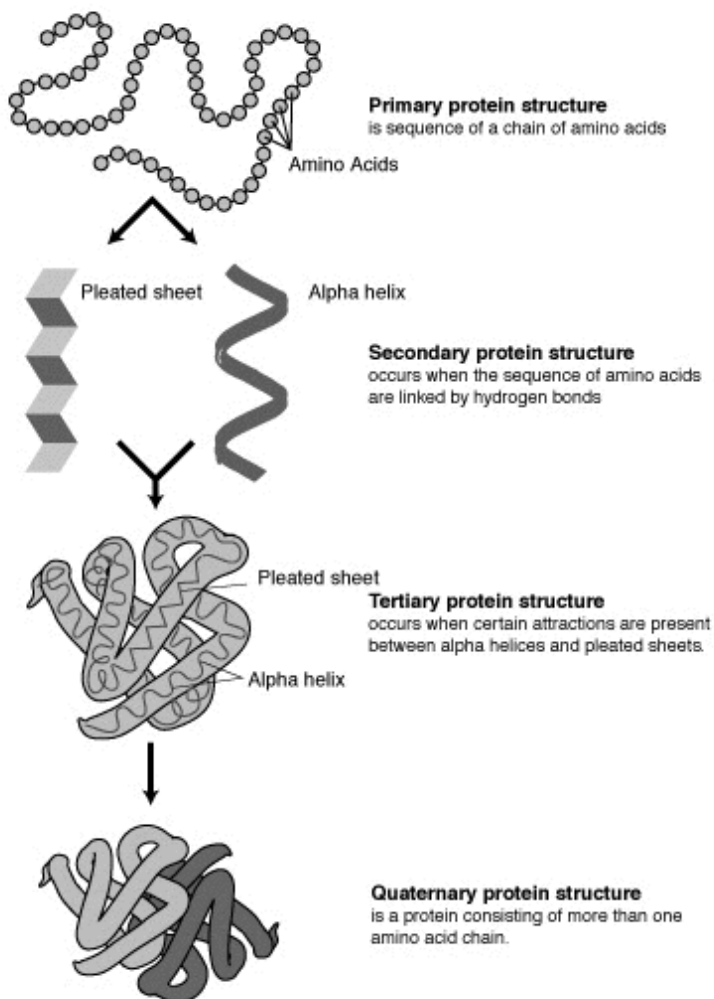
- Primary structure refers to the "linear" \_\_\_\_\_ of amino acids.
- Primary structure is sometimes called the "\_\_\_\_\_ \_\_\_\_\_" of proteins because, with the exception of disulfide bonds, all of the covalent bonding within proteins defines the primary structure.
- Secondary, tertiary and quaternary structure involve mainly \_\_\_\_\_ interactions.

15. \_\_\_\_\_ is the "global" folding of a single polypeptide chain.
16. A major driving force in determining the tertiary structure of globular proteins is the \_\_\_\_\_.
17. The tertiary structure of some proteins is stabilized by \_\_\_\_\_.
18. \_\_\_\_\_ involves the association of two or more polypeptide chains into a multi-subunit structure.
19. Each polypeptide within a protein folds more-or-less \_\_\_\_\_ into a stable tertiary structure and the folded subunits then associate with each other to form the final structure.
20. Quaternary structures are stabilized mainly by \_\_\_\_\_: \_\_\_\_\_, \_\_\_\_\_ interactions and \_\_\_\_\_, are involved in the interactions between subunits.

### **Part 3**

**Go to:**

<http://www.sumanasinc.com/webcontent/animations/content/proteinstructure.html> and complete the quiz.



For further reading on proteinomics visit: <http://www.bmb.uga.edu/wampler/tutorial/>