

Student Name _____

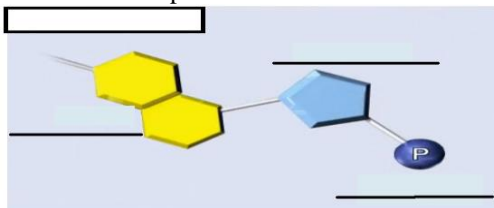
Period _____

TOPIC: **Structure PreAP**

OPTION 3: **Online**

Directions: Using your laptop, type in the following link <http://tinyurl.com/nj9qkd3> or you may click on the link directly on the Class web page, www.biologybynapiet.com. As you complete the online tutorial over biochemistry structure and answer the questions on this sheet. You may click on the "CC" button to see the words spoken by the narrator. Once a section has finished, click the blinking arrow at the bottom right.

1. Organic compounds are made up of what main element? _____ What other elements are typically bonded to it in organic molecules? _____
2. What biomolecule is found in bread? _____
3. Describe the structure of starch.
4. Describe the structure of fats.
5. Describe the interaction when lipids mix with water.
6. Protein is made up of _____ monomers.
7. In the box, label the name of the monomer that makes up nucleic acid. On the line label the parts of that monomer that makes up nucleic acid.



8. Build a disaccharide. Draw your molecule below, label all the parts, and answer the questions.
 - a. What biomolecule did you make? _____
 - b. How many sugar units make up a disaccharide? _____
 - c. What shape is each sugar unit? _____
 - d. Is energy required when your sugar units joined? _____
 - e. What is the name of the special type of protein that joined the two sugar units? _____
 - f. Starch is a polysaccharide found in (plant or animals) while glycogen is a polysaccharide found in (plants or animals)
 - g. Not on the online tutorial, but you need to know. What elements are found in carbohydrates?

9. Build a triglyceride. Draw your molecule below, label all the parts, and answer the questions.

- a. What biomolecule did you make? _____
- b. How many fatty acid chains make up a triglyceride? _____
- c. How would you describe the shape of the fatty acids? _____
- d. Not on the online tutorial, but you need to know. What elements are found in lipids?

10. Build a polypeptide. Draw your molecule below, label all the parts, and answer the questions.

- a. What biomolecule did you make? _____
- b. What type of bonds can form between the subunits to help in the twisting of the protein?

- c. Not on the online tutorial, but you need to know. What elements are found in proteins?

11. Build ATP. Draw your molecule below, label all the parts, and answer the questions.

- a. DNA is a polymer of _____.
- b. Besides DNA, what is other molecule is made up of nucleotides. _____
- c. What base is found in ATP? _____
- d. How many phosphate groups are found in a molecule of ATP? _____
- e. Two long nucleic acids are held together by what type of bonds? _____
- f. Not on the online tutorial, but you need to know. What elements are found in nucleic acids?
