

Student Name _____

Period _____

TOPIC: **Monomer and Polymers** - PreAP

OPTION 2: **Online**

Directions: Using your laptop, type in the following link <http://tinyurl.com/nblbcfs> or you may click on the link directly on the Biochemistry Unit page on the website. As you complete the online tutorial over building and breaking polymers answer the questions on this sheet.

Before you hit "Play" read the introduction paragraph and answer the questions:

1. Define a polymer.
2. Define a monomer.

Click "Play" and answer the questions as the tutorial plays. You can click "Show Narrative" to show the words as the narrator talks.

3. Many words in biology are based off of prefixes and suffixes. Why do we use the word polymer?

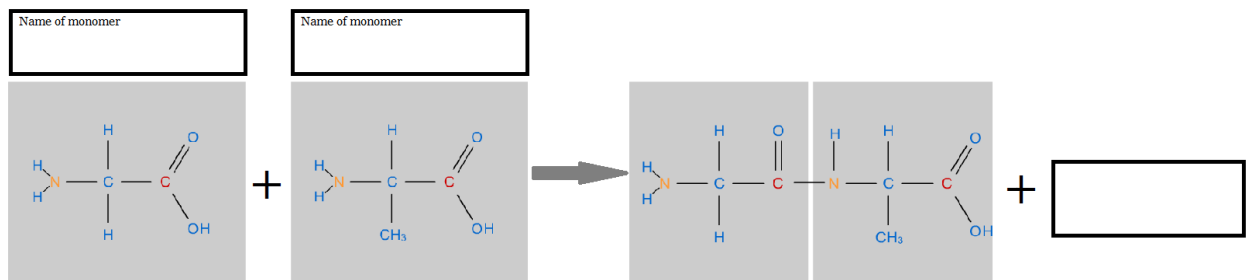
Why do we use the word monomer?

4. Complete the table of the biomolecules.

Polymer	Carbohydrate	Protein	Nucleic Acid
Monomer			

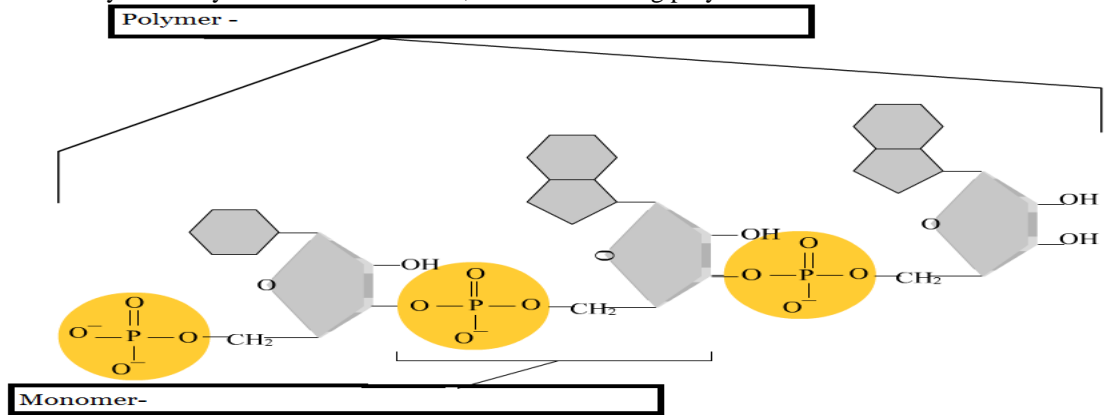
Dehydration synthesis

5. When two monomers are combined _____ is released. Explain why this water is released when the two monomers join.
6. In the box above each reactant, name the monomer. In the box of the product, name the missing molecule that is released in the reaction.



7. The sequence of the _____ in a protein determines its _____ and _____.

8. In the dehydration synthesis reaction below, fill in the missing polymer and monomer names.

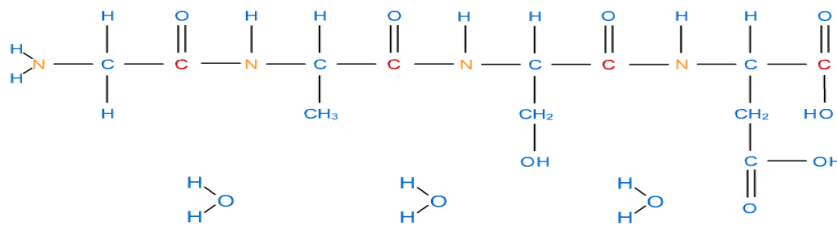


9. Not from tutorial, but need to know. In the dehydration synthesis reaction shown above,
- Is energy released or needed?
 - Is it an example of catabolism or anabolism?

Hydrolysis

- Define what the prefix “hydro” means.
- Define what the suffix “lysis” means.
- Explain a hydrolysis reaction.

13. In the polypeptide shown below, draw a line from each water molecule to the bond where hydrolysis would occur.



14. In the hydrolysis shown above, the polypeptide was broken into 4 _____ .
15. Not from tutorial, but need to know. In the hydrolysis reaction shown above,
- Is energy released or needed?
 - Is it an example of catabolism or anabolism?