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

**TOPIC 1: Biochemistry and the Molecules of Life**

*Please use the Khan Academy Video Podcast to guide you*

1. What does it mean for a compound to be organic?
2. Water is (circle one) **polar / nonpolar** because the electrons are not evenly shared.
3. What two properties of water are mentioned?

a.

b.

1. What is the difference between a monomer and polymer?
2. Dehydration synthesis \_\_\_\_\_\_\_ water to \_\_\_\_\_\_ a bond, while hydrolysis \_\_\_\_\_\_\_ water to \_\_\_\_\_\_\_a bond.
3. Carbohydrates have a \_\_: \_\_: \_\_ ratio of the elements C:H:O. Carbohydrates are the main \_\_\_\_\_\_\_\_\_\_\_\_ source for a cell.
4. What are the two monomers of lipids?

1. Lipids make up the majority of the cell \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. Nucleic acids have the following elements: \_\_\_\_\_\_\_\_\_\_\_\_. Nucleic acids store our \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Amino acids (the monomers of a protein are made up of what three parts?



1. How do enzymes act as biological catalysts?