1. What is the **Key Concept** for section 2-3? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Main Idea: Carbon atoms have \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ bonding properties.

Choose whether the statement is true or false. IF the statement is false, correct it.

\_\_\_\_\_\_\_\_1. Carbon atoms form the building blocks of *most* living things.

\_\_\_\_\_\_\_\_2. Carbon’s outer energy level is *full*.

\_\_\_\_\_\_\_\_3. Carbon atoms can form *covalent* bonds with up to four other atoms.

\_\_\_\_\_\_\_\_4. The three basic structures of carbon-based molecules are straight chain, *bent chain*, and ring.

5. Choose one of the three basic structures of carbon-based molecules to sketch in the space below. Label your sketch with the name of the basic structure.

|  |
| --- |
|  |

**Vocabulary Check –** Be sure you can explain and give examples of each

Monomer lipid amino acid polymer

fatty acid nucleic acid carbohydrate protein

6. What is the relationship between a polymer and a monomer? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. The prefix *mono-* means “one,” and the prefix *poly-* means “many.” Which contains more molecules, a monomer or a polymer? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are chains of carbon atoms bonded to hydrogen atoms.

9. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are molecules that contain carbon, hydrogen, oxygen, nitrogen, and sometimes sulfur. They are the monomers of protein.

**MAIN IDEA**: Four main types of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- based molecules are found in living things.

10 – 21. Complete the table with the functions and examples provided for each type of   
carbon-based molecule. Add one extra concept in each box

|  |  |  |  |
| --- | --- | --- | --- |
| Functions | Examples |  |  |
| Provide energy | meat | fat | oils |
| Building blocks of proteins | sugar | beans | DNA |
| Map for making proteins | RNA | starches | nuts |
| Store energy | Add your own | info to the chart |  |

|  |  |  |
| --- | --- | --- |
| Molecule Type & Monomer | Functions | Examples |
| Carbohydrate  Monosaccharide |  |  |
| Lipid  Monomer: |  |  |
| Protein  Monomer: |  |  |
| Nucleic acid  Monomer: |  |  |

22. Go to your online student edition of the text and go to “interactive review” and then on “self-checks”. Take the 2-3 Self-Check Quiz and record your score below. Write out the question AND answer to the ones you missed or the most difficult one.

\_\_\_\_\_ / \_\_\_\_\_