**Carbon and Carbohydrate Review Worksheet**

**Directions:** *For the following statements, write true or false.*

\_\_\_\_\_\_\_\_\_\_\_\_ 1. The formula for all carbohydrates is C6H12O6

\_\_\_\_\_\_\_\_\_\_\_\_ 2. Carbon atoms bond together in straight chains, branched chains, or rings.

\_\_\_\_\_\_\_\_\_\_\_\_ 3. Isomers are compounds with the same simple formula but different three dimensional

structure.

\_\_\_\_\_\_\_\_\_\_\_\_ 4. Large molecules containing carbon are called micromolecules.

\_\_\_\_\_\_\_\_\_\_\_\_ 5. Milk sugar is the common name for maltose.

**Directions**: *Write the name or formula under the correct heading Use these items:*

Sucrose Glucose Starch C6H12O6

Cellulose Maltose Fructose C12H22O11

Galactose Lactose Glycogen

|  |  |
| --- | --- |
|  | **Monosaccharide** |
| 1. |  |
| 2. |  |
| 3. |  |
| 4. |  |

|  |  |
| --- | --- |
|  | **Disaccharide** |
| 5. |  |
| 6. |  |
| 7. |  |
| 8. |  |

|  |  |
| --- | --- |
|  | **Polysaccharide** |
| 9. |  |
| 10. |  |
| 11. |  |

Direction: *Answer the following questions.*

1. List the 3 types of carbohydrates.
   1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What is the difference between a monosaccharide, disaccharide and a polysaccharide?
2. What is the following reaction showing? **Maltose + water 🡪 Glucose + Glucose**
   1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. What are the reactants? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. What is the following reaction showing? **Glucose + Glucose 🡪 Maltose + water**
   1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. What are the products?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. What elements make up all carbohydrates?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   1. What is the ratio of hydrogen to oxygen in all carbohydrates \_\_\_\_hydrogen: \_\_\_\_\_oxygen
5. A compound that contains ONLY hydrogen and carbon atoms is called a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Write the chemical formula for the 3 functional groups below:
   1. Amino = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Alcohol = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Carboxyl = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What are some foods that contain carbohydrates?
2. Write the chemical formula for the following compound. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

