Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_
**Polymers, Dehydration Synthesis**

**and Hydrolysis Notes**

How Do we build them up and how do we break them down? BUT FIRST….

BY THEM we mean compounds and/or molecules remember molecules make up compounds

What is a polymer- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

What are the sub-units of a choo-choo train?

 A single car = a sub-unit or \_\_\_\_\_\_\_\_\_\_\_\_\_

 Two sub-units = dimer

 3 sub-units or more =\_\_\_\_\_\_\_\_

**Polymer Monomer (building blocks)**

Complex carbohydrates aka \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ -------------🡪 simple sugars ie \_\_\_\_\_\_\_\_\_\_

Lipids (fats, Waxes and oils) not true polymers but quite large ----🡪 \_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_

Proteins aka \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ -----------------------------------------🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Nucleic Acids (DNA & RNA) aka \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ --------------🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Now how do we build them and how do we break them

Dehydration synthesis “dehydration = “synthesis” =

Hydrolysis “Hydro = “lysis”=

|  |  |  |  |
| --- | --- | --- | --- |
| Process  | Starts with  | Ends With  | Example  |
| Dehydration Synthesis  | Small molecules (sub-units) | Larger molecules & water | Growth  |
| Hydrolysis  | Water and large molecules  | Small molecules (sub-units)  | Digestion  |

**Examples**

|  |  |
| --- | --- |
| Starts with  | Ends With  |
| (Dehydration synthesis)Glucose + glucose (needs energy) Image result for glucose moleculeImage result for glucose molecule | (Dehydration synthesis)Maltose and water Image result for sucrose |
| (Hydrolysis) maltose and water Image result for sucrose | (Hydrolysis) Glucose + glucose Image result for glucose moleculeImage result for glucose molecule |