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 |