**Carbohydrates and Dehydration Reactions Name:**

1. The units to the right are monomers. Explain what this means.

1. Many molecules form a chemical bond during a dehydration reaction. What occurs to allow these covalent bonds to form?
2. When these two monosoccharides combine, what will the resulting two-sugar molecule be called? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Give two examples: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. When you combine your subunits with those of the rest of the class, what will we name the final result? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. There is a significant difference in the taste of small carbohydrate molecules (monosaccharides and disaccharides) and large ones (polysaccharides). What is the difference in the way these groups taste, and how does this help us to classify these two categories of carbs?
5. Contrast the digestion, absorption, metabolism, and storage of the energy in simple sugars compared to that of complex carbohydrates, and explain how this is helpful information for your daily life!
6. The polymer that the class has built is missing some elements that were part of the monomers at the beginning of the activity. What are these elements, and what happened to them?
7. Explain the process that would occur to break this macromolecule back down into its subunits.

**Dehydation Synthesis Activity**:

You will combine your two monosaccharide units through a decomposition reaction.

1. Cut out each of your monosaccharide units below.
2. Cut off the elements that will be removed from each monosaccharide and place them to the side.
3. Attach the monosaccharides in the appropriate organization with tape or glue. You have created a chemical bond.
4. Use dehydration synthesis to combine your molecule with those of other students until all of the units in the class have become chemically bonded into one macromolecule.



