**Vocabulary: Dehydration Synthesis**

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**Vocabulary**

* Carbohydrate – an organic molecule made up of carbon, hydrogen, and oxygen.
  + Carbohydrates are the main energy source for most types of cells.
  + Carbohydrates are initially formed by plants through the processes of photosynthesis and *dehydration synthesis*.
  + Foods rich in carbohydrates include grains, fruits, and sugars.
* Chemical formula – a symbolic representation of an element or compound.
  + Chemical formulas use subscripts and parentheses to denote the number of atoms in a molecule of the substance.
  + Examples of chemical formulas include NaCl (table salt), H2O (water), and Ca(OH)2 (calcium hydroxide).
* Dehydration synthesis – a chemical reaction in which two or more molecules bond by losing one or more water molecules.
  + Plants build starches through dehydration synthesis.
* Disaccharide – a carbohydrate made of two *monosaccharides*.
  + Examples of disaccharides include maltose (two glucose molecules) and sucrose (one glucose molecule and one fructose molecule).
* Glucose – a monosaccharide with the chemical formula C6H12O6.
  + Glucose is the primary molecule used during cellular respiration reactions.
* Hydrolysis – a chemical reaction in which the interaction of water and a compound result in the breaking up of that compound.
  + Your digestive system breaks down starches through hydrolysis.
* Monosaccharide – the simplest type of carbohydrate.
  + Examples of monosaccharides include glucose and fructose.
* Oligosaccharide – a carbohydrate made of three to ten monosaccharides.
  + Carbohydrates made up of more than ten monosaccharides are *polysaccharides*.
* Valence – the number of chemical bonds an element is capable of forming.
  + The valence of an element is equal to the number of electrons that an atom of that element gains, loses, or shares while forming chemical bonds.