

**Standard 1: Explain** how the carbon atom and water are important to life

The carbon atom is one of the most important elements on the planet because it has \_\_\_\_\_ free electrons and can form \_\_\_ bonds with other atoms. Often these are \_\_\_\_\_ bonds and are considered strong bonds. As a result of this ability of carbon, it can form \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_. This is important because it allows for a wide variety of shapes and functions when carbon is used in making molecules. The bonds between \_\_\_\_\_ and \_\_\_\_\_ contain large amounts of energy.

Water is \_\_\_\_\_ at room temperature, but will \_\_\_\_\_ when frozen because it has a lower \_\_\_\_\_ than the liquid form. Water is made of \_\_\_\_\_ and \_\_\_\_\_ atoms. The \_\_\_\_\_ have a negative charge and the \_\_\_\_\_ have a positive charge. This creates an \_\_\_\_\_ distribution of charges and is the reason why water is called a \_\_\_\_\_. Additionally, water is able to create \_\_\_\_\_ bonds with other water molecules because the negative \_\_\_\_\_ atoms of one molecule bond with the positive \_\_\_\_\_ atoms of another molecule.

	<b>Surface Tension</b>	<b>Adhesion</b>	<b>Cohesion</b>	<b>Temperature Moderation</b>
<b>Characteristics:</b>				
<b>Examples:</b>				

**Standard 2: Identify** the characteristics and examples of carbohydrates, proteins, lipids.

	<b>Carbohydrates</b>	<b>Proteins</b>	<b>Lipids</b>	<b>Nucleic Acids</b>
<b>Monomers:</b>		No Monomers		
<b>Characteristics:</b>				
<b>Uses, functions, examples:</b>				
<b>Food Examples:</b>				

Macromolecules are made of simple single units called \_\_\_\_\_. These can be combined by joining two together through a process called \_\_\_\_\_. The end result of this process is \_\_\_\_\_ & \_\_\_\_\_.

**Carbohydrates:**

Carbohydrates can be used to store \_\_\_\_\_ in plants through a highly \_\_\_\_\_ molecule called \_\_\_\_\_. Animal energy store in animals is called \_\_\_\_\_. Plant cell walls (stems and leaf) are made of \_\_\_\_\_ which provides \_\_\_\_\_ and \_\_\_\_\_. A large number of carbohydrate monomers (\_\_\_\_\_) create a molecule called \_\_\_\_\_.

**Proteins:**

Proteins can serve as \_\_\_\_\_ which reduce the energy necessary or speed up a reaction. They can also serve as \_\_\_\_\_ in the cell membrane or for oxygen in \_\_\_\_\_. They help to maintain \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, etc.

**Lipids:**

Lipids are a major component of the \_\_\_\_\_. They are also helpful for storing \_\_\_\_\_ for long time and \_\_\_\_\_.

**Nucleic Acids:**

Contain the \_\_\_\_\_ for making proteins. Examples are \_\_\_\_\_ and \_\_\_\_\_

