**MATTER ESSAY**

Matter consist of three different categories; elements, compounds, and mixtures. A compound is created through a chemical change, and identified by a chemical formula, for example H2O. A compound is classified as either organic or inorganic. The properties of joined types of matter in a compound change.

 A mixture is not a pure substance that can be classified as homogeneous or heterogeneous in structure. Mixtures are created through a physical change, and can be separated or broken down by physical means. Mixtures are physically held together with no chemical bonds. The individual properties of mixed parts do not change, and they are identified by the ingredients they contain.

 The third category is an element. An element is made of an atom. The element is the smallest unit in an atom. Elements are created through nuclear fusion, and identified as a chemical symbol. An element can be classified as three different things, a metal, nonmetal, or a metalloid. The characteristic properties do not change in an element, and an element is held together by negative and positive attracted charges. The parts of an element are chemically joined with chemical bonds.

 Characteristics all three categories have are, they are made by humans or nature. Another characteristic is that they all have physical or chemical properties. The last characteristic is that mixtures, compounds, and elements are either a solid, liquid, or gas.

 Along with characteristics they all have there are characteristics that a compound and an element share. Both a compound and an element are homogeneous in structure. Compounds and elements cannot be broken down or separated physically. Lastly, they are both pure substances.

 Along with element and compound similarities, they are similarities between mixtures and compounds. They are made up of the smallest unit, a molecule. Mixtures and compounds are made up of two or more types of elements.