Name : ---------- Date : ----------

Law of Conservation of Mass Worksheet

1. What is the law of conservation of mass? Explain with examples for both physical changes and chemical changes. Show reactions wherever necessary.

   Example of a physical change:

   Example of a chemical change:

2. Is this law applicable to all sorts of chemical reactions?

3. Does the law help with regard to balancing chemical equations?

4. Who was the scientist that first stated this law and when did they do it?

Name : ---------- Date : ----------

—— Law of Conservation of Mass Worksheet ——

Answers

1. What is the law of conservation of mass? Explain with examples for both physical changes and chemical changes. Show reactions wherever necessary.

   According to the law of conservation of mass, mass is neither created nor destroyed during a reaction taking place in a closed system. It can only change the state in which it currently is in.

   Example of a physical change:

   Ice melts to become water in the presence of heat. If heated further, it goes from a liquid state to the gaseous state of water vapor.

   Example of a chemical change:

   $2H_2 + O_2 \rightarrow 2H_2O$

   In the above reaction, two molecules of hydrogen and one molecule of hydrogen combine to form two water molecules. Despite the reactants and the products being completely different with different chemical properties, the mass of the reactants is the same as the product.

2. Is this law applicable to all sorts of chemical reactions?

   Yes, it applies to every reaction that takes place in a chemical reaction. In an open system, products have a chance to escape, so the mass may appear to be different.

3. Does the law help with regard to balancing chemical equations?

   By balancing equations, the total mass of the reactants remains equal to the total mass of the products. This is in accordance to the law of conservation of matter.

4. Who was the scientist that first stated this law and when did they do it?

   Antoine Lavoisier first stated this law in 1789.