**Name:**

**Date:**

**School:**

**Facilitator:**

3.04 Conservation of Mass Questions

**Answer the following questions which involve the law of conservation of mass and molar mass. Please show all your work for all math problems in the spaces indicated below. You may use the periodic table linked on the Task page to assist you. You may type your work or print this sheet, show your math work by hand, and then scan the sheet back in for submission if you choose.**

1. Define the following terms:
   1. Law of Conservation of Mass:
   2. Molar Mass:
   3. Mole:
2. Determine the molar mass of NaCl:
   1. Show the work you used to arrive at the answer here:
3. Deterine the molar mass of H2SO4:
   1. Show the work you used to arrive at the answer here:
4. 2 Na + Cl2 → 2 NaCl
   1. Using the above reaction, determine the total mass of the reactants:
      1. Show the work you used to arrive at the answer here:
   2. Using the above reaction, determine the total mass of the products:
      1. Show the work you used to arrive at the answer here:
   3. Do your answers verify the law of conservation of mass? Why or why not?
5. 2 H2O2 → 2 H2O + O2
   1. Using the above reaction, determine the total mass of the reactants:
      1. Show the work you used to arrive at the answer here:
   2. Using the above reaction, determine the total mass of the products:
      1. Show the work you used to arrive at the answer here:
   3. Do your answers verify the law of conservation of mass? Why or why not?
6. A scientist performs an experiment in a lab. He mixes 15 g of Chemical A with 34 g of Chemical B to make the compound AB. According to the law of conservation of mass, how many grams of product (AB) should be produced?

A + B → AB

15g 34g → ?