**Classwork: - Writing Chemical Equations**

**Directions: Write the skeleton equation for each reaction.**

1. Nitrogen gas reacts with oxygen gas to produce dinitrogen monoxide gas.
2. Iron metal reacts with sulfuric acid solution to produce a solution of iron (III) sulfate and hydrogen gas.
3. Charcoal (carbon) reacts with water to produce carbon monoxide gas and hydrogen gas.
4. Rocket fuel, liquid hydrazine (dinitrogen tetrahydride) reacts with oxygen gas to produce steam and ammonia gas (NH3).
5. Gallium sulfite and calcium nitrate solutions react to produce an gallium nitrate solution and a precipitate of calcium sulfite
6. Liquid hexane (C6H14) is burned in the presence of oxygen gas to produce carbon dioxide gas and water vapor.
7. Rubidium metal is burned in air (oxygen) to produce solid rubidium oxide.
8. A solution of hydrogen peroxide (H2O2) is catalytically decomposed into water and oxygen gas.
9. Solutions of manganese (II) sulfite and ammonium sulfide are mixed to produce ammonium sulfite solution and manganese (II) sulfide precipitate.
10. In photosynthesis, carbon dioxide gas and water react in the presence of sunlight to produce liquid glucose (C6H12O6), which the plant uses for fuel and oxygen gas.
11. The fluoride in many toothpastes is tin (II) fluoride, a solid produced by the reaction of solid tin with gaseous hydrofluoric acid. A second product is hydrogen gas.
12. Glass is often etched to produce a design. In this process, the calcium silicate solid (Ca2SiO4) found in the glass reacts with a solution of hydrofluoric acid to produce a solution of calcium fluoride, silicon tetrafluoride gas, and liquid water.