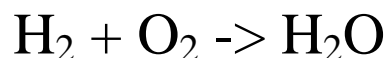
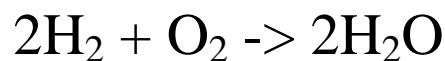


Chemical Reactions Notes

- Most things in the world happen because of chemical reactions
- Chemical changes
 - Happen when atoms are rearranged
 - Change the color, temperature or smell
- Chemical Reactions can be written as an equation
- Chemical Equations have 3 parts
 - An arrow shows something happened
 - The Reactants, found on the left side of the arrow, are the starting material
 - The Products, found on the right side of the arrow, are what is made during the reaction
- Law of the Conservation of Matter-matter cannot be created or destroyed, but it can change forms
- Formula for making water:



- This equation is **unbalanced** because there are more atoms in the reactants than the products
- Add coefficients to balance the equation:



- To balance equations:
 - Step 1-Write all atoms involved under the arrow
 - Step 2-Count the atoms on both sides of the arrow
 - Step 3-Change the coefficients
 - Step 4-Count the new number of atoms

Step 1: $\text{Na} + \text{Cl}_2 \rightarrow \text{NaCl}$

 Na
 Cl

Step 2: $\text{Na} + \text{Cl}_2 \rightarrow \text{NaCl}$

 1 Na 1
 2 Cl 1

Step 3: $2\text{Na} + \text{Cl}_2 \rightarrow 2\text{NaCl}$

 1 Na 1
 2 Cl 1

Step 4: $2\text{Na} + \text{Cl}_2 \rightarrow 2\text{NaCl}$

 2 Na 2
 2 Cl 2