

Chapter 6 : Chemical Reactions NOTES

A. Chemical reactions:

1. Always result in the formation of _____ substances.
2. Involve _____ & _____
3. _____ bonds between atoms, _____ these atoms and _____ bonds are form.
4. Always involve a change in _____: (**see p 206**)
_____ **reaction** (heat _____)
_____ **reaction** (heat _____)-
5. Are determined by the arrangement of the _____ *electrons* in each atom.

B. Chemical Equations: a _____ way to describe a chemical reaction.

1. symbols = _____
2. formulas = _____
3. chemical equations = chemical _____
4. + = _____
5. \longrightarrow = _____
6. \downarrow = a _____ is formed (_____)
7. \uparrow = a _____ is formed
8. Δ (delta) = means _____ is added to the reaction or _____

C. Coefficients: numbers placed in _____ of a formula.

= number of _____ Ex- _____

D. Subscripts: numbers placed _____ & _____ a symbol.

= number of _____. Ex- _____

E. Law of Conservation of Mass: During a chemical reaction, matter is not

_____ or _____.

*The number of atoms of each element must be the _____ on each side of the reaction; **BALANCED!***

F. Rate of Chemical Reactions

Chemist can control rates of reactions by changing:

1. _____: _____ surface area = _____ reaction rate (vise versa)
2. _____: _____ temperature = _____ reaction rate (vise versa)
3. _____: _____ concentrate of reactants = _____ reaction rate
4. _____: a material that _____ reaction rate _____
_____ the reaction. Ex- _____
5. _____: a material used to _____ the rate of reaction.
Ex- _____ - prevents food _____.

G. Rules for Balancing Equations

1. Write down the _____.
2. _____: add subscript if alone.
3. Neutralize _____ by using _____. (show oxidation #s)
4. Balance equation by using _____. (make charts)

H. Balancing equations practice: (complete on your own loose-leaf)

