Physics 112

Monday, October 29/18

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Progress Reports

1. Questions? -> SA - U1 S3 - Mathematical Analysis
2. Return -> FA - Types of Forces and Weight Problem
3. FA - Free Body Diagrams
4. Questions?
   Worksheet - Practice Problems (PP) - C4, Page 144: 5-8
5. PFU: Page 151, #26-28, 30-32, 34

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6. FA - First Law Problem - Tomorrow
7. Newton's Second Law of Motion - Law of Force, Mass and Acceleration
8. Worksheet Packet - Second Law Problems
   - Mixed Law Problems

Physics 122

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Progress Reports

1. Submit/Return - FAs - Relative Velocity (3)
   FA - 1D Explosion
   FA - 1D Collision and Type of Collision

2. Worksheets - 2D Collisions and Explosions (2)

3. FA - 2D Collision

4. FA - 2D Exlposion

5. SA - U1 S3&4 - Relative Velocity and Collisions/Explosions
   - Date: Thursday, Nov. 1

   1. relative velocity - // directions
   2. relative velocity - $\perp$ directions (boat/plane)
   3. relative velocity - intersection problem
   4. 1D collision/explosion with type
   5. 2D collision
   6. 2D explosion

Science 10

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Progress Reports

1. FA - Identifying Types of Reactions and Balancing
   FA – Translating Reactions
   FA - Predicting Products

2. SA - Chem #3 - Topics

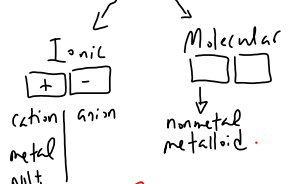
3. Class Review - SA Chem #3

4. Review SA - Chem #3

5. SA - Chem #3 - Date: Thursday, Nov. 1

Class Review for SA Chem #3

Types of Compounds



ie/ B_2O_7 - molecular
(metalloid)

ie/ $MgCl_2$ - ionic
(metal)

ie/ ammonium bromide - ionic
(NH_4^+)

Types of Ionic Compounds

1. Simple binary ionic compounds
   ↳ 2 atoms (ions)
   ie/ sodium bromide (metal) $Na^+ Br^-$ → $NaBr$

2. ionic cpd with a polyatomic ion
   ie/ magnesium phosphate (metal; polyatomic)
   Mg^{2+} $(PO_4)^{3-}$ → $Mg_3(PO_4)_2$
   x "-ite"
   x 4 "-ide"

3. ionic compounds with multivalent metal
   x multivalent metal
   Mg^{2+} S^{2-} MgS
   ie/ copper (II) phosphide
   (multivalent)
   Cu^{2+} P^{3-} → Cu_3P_2

   Fe^{3+} iron (III)
   Fe^{2+} iron (II)

Molecular Compounds

- Prefixes:

1 - mono	6 - hexa
2 - di	7 - hepta
3 - tri	8 - octa
4 - tetra	9 - nona
5 - penta	10 - deca

→ diatomic molecules (7)
↳ 2
- molecular hydrogen H_2

others: N_2, F_2, O_2, I_2, Cl_2, Br_2.

[— molecular sulfur: S_8
molecular phosphorus: P_4]

— common names:

water → dihydrogen monoxide (H_2O)
ammonia → nitrogen trihydride (NH_3)
hydrogen peroxide → dihydrogen dioxide (H_2O_2)

Topics: SA - Chem #3

H

1. ionic compounds - electrically neutral
2. be able to write the names of simple binary ionic compounds given their formulas and vice versa
3. be able to write the names of ionic compounds containing polyatomic ions given their formulas and vice versa
4. know the roman numerals 1-10
5. be able to write the names of ionic compounds containing multivalent metals given their formulas and vice versa
6. be able to write the names of ionic compounds containing multivalent metals and polyatomic ions given their formulas and vice versa
7. molecular compounds = covalent compounds = molecules
8. prefixes 1-10
9. diatomic molecules: H_2, N_2, O_2, F_2, Cl_2, Br_2, I_2
10. special molecules: P_4, S_8, water, ammonia, hydrogen peroxide
11. be able to write the names of binary molecular compounds given their formulas and vice versa
12. identify ionic compounds and molecular compounds
13. define chemical reaction
14. identify reactants and products
15. be able to state the Law of Conservation of Mass
16. be able to balance chemical reactions
17. be able to identify the five types of reactions (formation, decomposition, single replacement reactions, double replacement reactions and combustion reactions)
18. be able to translate sentences and/or word equations to balanced chemical equations
19. be able to predict the products of chemical reactions.