

Unit 5: Bonding/Chemical Reactions

Reading Assignments

No textbook reading assignments

Supplementary Reading

9 “Bang, Sparkle, Burst and Boom”,
Science News For Kids (29 Jun 2005) Due: _____

Homework/Activities

9 **Activity 3: Letters to Words** Due: _____
Think: *Separate Handout*
Activity: *Separate Handout*
Read: *Separate Handout*
Apply: *Separate Handout*

9 Worksheet: Nomenclature Ionic Due: _____

9 Worksheet: Nomenclature Covalent Due: _____

9 **Activity 4: Making a Sentence** Due: _____

Think: *Separate Handout*

Activity: *Separate Handout*

Read: *Separate Handout*

Apply: *Separate Handout*

9 Worksheet: Balancing Equations Due: _____

Concepts/Topics

- 9 Notation: subscript, coefficient, reactants, products, arrow, states of matter
- 9 Compounds vs. elements
- 9 Chemical bonds: ionic, covalent
- 9 Naming covalent compounds
- 9 Naming ionic compounds
- 9 Polyatomic ions
- 9 Balancing reactions
- 9 Types of reactions: synthesis, decomposition, single replacement, double replacement, combustion

Target Outline

Letters to Words

- ...be able to explain the difference between an element and a compound
- ...identify and define covalent and ionic bonds
- ...be able to explain what the coefficients and subscripts represent in a chemical formula
- ...be able to give the name for a compound from its chemical formula

Making a sentence

- ...be able to identify the “reactants” and the “products” in a chemical reaction
- ...be able to explain the significance of the reaction arrow in a chemical reaction
- ...be able to identify and match the notations: (g), (l), (s), (aq) with the physical states they represent.
- ...be able to balance the number of atoms on each side of a chemical reaction using coefficients
- ...know four reaction types (synthesis, decomposition, single replacement, double replacement) and be able to correctly classify a given chemical reaction as one of those four types.

Web Resources

Chemical Bonds

www.chem4kids.com/files/atom_bonds.html

Naming Compounds

www.chem4kids.com/files/atom_naming.html

Types of Chemical Reactions

www.schools.utah.gov/cur/science/sciber00/8th/matter/sciber/chemtype.htm

Chemical Reactions

students.ed.uiuc.edu/ljgriffi/project/grifunit3/griffchemicalreactions.htm

Balancing Equations (practice!)

education.jlab.org/elementbalancing/index.html

Formulas to names

science.widener.edu/svb/tutorial/namingcsn7.html

Names to formulas

science.widener.edu/svb/tutorial/namestoformulascsn7.html

Chemical Reactions

www.chemistryland.com/CHM130W/08-Equations/TypesReactions/TypesReactions.htm