

Coral Glades High School

2011 – 2012 Course Syllabus

Teacher:	Julie Kitchener	Phone:	754-322-1250
Subject:	Chemistry I	Email:	julie.kitchener@browardschools.com
Room:	228	Planning Hour:	Periods 4 and 7

Course Description:

Chemistry I will provide students with an opportunity to study the composition, properties, and changes associated with matter. Topics will include, but not be limited to: heat, changes of matter, atomic structure, bonding, the periodic table, formulas, equations, mole concept, gas laws, reactions, solutions, equilibrium systems, and oxidation reduction reactions. Laboratory activities, which include the use of the scientific method, measurement, laboratory apparatus, and safety, are an integral part of this course.

Resources:

Text: Class Website :	- Holt Modern Chemistry http://kitchenerchem.tripod.com
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Materials:

Folder or binder with paper
Scientific calculator
Pen (blue or black ink), # 2 pencils, highlighter

Evaluation:

Broward County Grading Scale:		Approximate Grading Breakdown:
90 – 100%	A	A point system is used in this class. The goal is to accumulate as many points as possible out of the total number assigned.
87 - 89%	B+	
80 – 86 %	B	
77 – 79%	C+	
70 – 76%	C	
67 – 69%	D+	
60 – 66%	D	
0 - 59%	F	

NOTE:

- Midterm exam will cover all of semester one content and the final exam will cover all of semester two content. It will consist of multiple choice and problem solving questions which will require the use of higher order thinking skills.
- All school and county policies will be followed as per the Broward County Student Code of Conduct.
- Material in this syllabus is subject to modification by instructor if deemed necessary.
- Activities listed are tentative and may be supplemented or changed as deemed appropriate.

Unit#: I		Unit Title: MATTER AND MEASUREMENT		Pacing: 15 /135 (11%)
Concepts	Resources	Benchmarks: Objectives and Skills www.floridastandards.org	Differentiated Instruction: Activities and Labs.	
Lab Skills and Safety	Textbook pp.xviii-xxi Safety Contracts		Lab Safety video Lab Safety poster	
The Practice of Science	Chapter 1 Section 1	SC.912.N.1.2, SC.912.N.1.6, SC.912.N.1.7, SC.912.N.2.1	Observing Changes	
Properties of Matter	Chapter 1 Section 2	SC.912.P.8.1, SC.912.P.8.2	Lab: Mixture Separation Lab: Paper Chromatography Lab: Reaction in a Bag	
Elements	Chapter 1 Section 3	SC.912.P.8.5		
Scientific Method	Chapter 2 Section 1	SC.912.N.1.3, SC.912.N.1.7, SC.912.N.2.1, SC.912.N.2.2, SC.912.N.2.3, SC.912.N.2.4, SC.912.N.3.1, SC.912.N.3.2, SC.912.N.3.3, SC.912.N.3.4,	Scientific Method Lab	
Scientific Measurement	Chapter 2 Sections 2 and 3	MA.912.S.1.2, MA.912.S.3.2, LA.910.2.2.3, SC.912.N.1.6	Lab: Density Lab: Making measurements	
Unit#: II		Unit Title: ATOMIC STRUCTURE & MODELS		Pacing: 15/135 (11 %)
Atomic Structure	Chapter 3 1. Atomic theory 2. Atom structure 3. Counting Atoms	SC.912.N.3.5, SC.912.P.8.3, SC.912.P.8.4, SC.912.P.8.9. SC.912.P.10.10, LA.910.2.2.3	Lab: Isotopes Lab: Constructing a Model Lab: Conservation of Mass	
Atomic Models	Chapter 4 Section 1	SC.912.N.3.5, SC.912.P.8.3, SC.912.P.8.4, SC.912.P.10.9, SC.912.P.10.18	Demonstrations	
Unit#: III		Unit Title: NUCLEAR CHEMISTRY		Pacing: 10/135 (7 %)
The Nucleus	Chapter 21 Section1	SC.912.P.10.12		
Radioactive Decay	Chapter 21 Section 2	SC.912.P.10.11, SC.912.P.10.12		
Nuclear Radiation	Chapter 21 Section 3	SC.912.L.16.10, SC.912.L.17.20, SC.912.P.10.11	Lab: Half-Life	
Nuclear Fission and Nuclear Fusion	Chapter 21 Section 4	SC.912.E.5.1, SC.912.P.10.10, SC.912.P.10.11, SC.912.E.5.1, LA.910.2.2.3		

Unit#: IV		Unit Title: PERIODICITY & BONDING	Pacing: 20/135 (15 %)
Periodicity	Chapter 5 1. History of the Periodic Table 2. Electron Configuration 3. Periodic Properties	SC.912.P.8.3, SC.912.P.8.5, LA.910.2.2.3	Periodic Trend Activity Lab: Emission Spectra Lab: Flame Test for Cations Periodic Families Lab
Chemical Bonding	Chapter 6 Section 1	SC.912.N.1.6, SC.912.P.8.6	Lab: Atoms and Ions
Covalent Bonding	Chapter 6 Section 2	SC.912.N.4.2, SC.912.P.8.7	
Ionic Bonding	Chapter 6 Section 3	LA.910.2.2.3	Lab: Ionic Compounds
Intermolecular Forces	Chapter 6 Section 5 pp.203-207 only	SC.912.N.3.5, SC.912.P.8.6, SC.912.P.8.7	Lab: Properties of Water
Unit#: V		Unit Title: CHEMICAL FORMULAS & REACTIONS	Pacing: 20/135 (15 %)
Chemical Names and Formulas	Chapter 7 Section 1	SC.912.P.8.7, LA.910.2.2.3	Create ion flash cards Activity: Ionic v's Covalent
Determining Chemical Formulas	Chapter 7 Section 4	SC.912.P.8.7	Determining the Empirical Formula of Magnesium Oxide
Chemical Equations	Chapter 8 Section 1	SC.912.P.8.2 SC.912.P.10.12	
Chemical Reactions	Chapter 8 Section 2	SC.912.P.8.8 SC.912.N.1.6, SC.912.N.4.1, LA.910.2.2.3	Lab: Single-Displacement Reactions Lab: Double-Displacement Reactions
Unit#: VI		Unit Title: STOICHIOMETRY	Pacing: 10/135 (7 %)
Stoichiometry	Chapter 9 Section 1	SC.912.N.1.5, SC.912.N.2.5, SC.912.P.8.9	Lab: Moles of Calcium Carbonate
Stoichiometric Calculations	Chapter 9 Section 2	SC.912.P.8.9	
Limiting Reactants and Percent Yield	Chapter 9 Section 3	SC.912.P.8.9	Lab: Limiting Reactants
Unit#: VII		Unit Title: STATES OF MATTER	Pacing: 10/135 (7 %)
Kinetic Molecular Theory	Chapter 10 Section 1	SC.912.P.8.1, SC.912.P.10.5, SC.912.P.12.10	Demonstration
Liquids	Chapter 10 Section 2	SC.912.P.8.1, SC.912.P.10.5, LA.910.2.2.3	
Solids	Chapter 10 Section 3	SC.912.P.8.1	
Changes of State	Chapter 10 Section 4	SC.912.P.8.2, SC.912.P.12.11, MA.912.S.3.2	Demonstration: Dry Ice Sublimation Lab: Heating Curve for Water
Unit#: VIII		Unit Title: ACIDS & BASES	Pacing: 15/135 (11 %)

Properties of Acids & Bases	Chapter 14 Section 1	SC.912.L.17.15, SC.912.L.17.16, SC.912.L.17.20, SC.912.L.18.12, SC.912.N.4.1, LA.910.2.2.3	Quick Lab: Household Acids & Bases
Acid-Base Reactions	Chapter 14 Section 3	SC.912.P.8.8	Lab: Is It an Acid or a Base?
pH	Chapter 15 Section 1	SC.912.L.17.15, SC.912.L.17.16, SC.912.L.18.12, SC.912.N.4.2, SC.912.P.8.11, LA.910.2.2.3	Lab: Testing pH of solutions with pH paper
Titration	Chapter 15 Section 2	SC.912.L.18.12, SC.912.P.8.11	Demonstration: pH change in an Acid-Base Titration
Unit#: IX Unit Title: REACTION ENERGY & KINETICS		Pacing: 10/135 (7%)	
Thermochemistry	Chapter 16 Section 1	SC.912.P.10.1, SC.912.P.10.2, SC.912.P.10.5, SC.912.P.10.6, SC.912.P.10.7,	Demonstration: Boiling water in a Paper cup Demonstration: Hess’s Law Lab: Calorimetry and Hess’s Law
Reaction Process	Chapter 17 Section 1	SC.912.P.10.6	
Reaction Rate	Chapter 17 Section 2	SC.912.L.17.15, SC.912.L.17.16, SC.912.P.12.12	Demonstration: Decomposition and Catalysts Quick Lab: Factors Influencing Reaction Rate
Unit#: X Unit Title: CHEMISTRY & UNIFYING THEMES		Pacing: 10/135 (7%)	
Notes: *These benchmarks are linked to Chemistry NGSSS but are not covered in previous chapters. They may be covered at any time throughout the curriculum.			
Dynamic Equilibrium	Chapter 18 pp.589-595	SC.912.P.12.13	
Carbon Diversity	Chapter 22 pp. 711-713	SC.912.P.8.12	All About Carbon
Renewable and Nonrenewable Resources	Chapter 22 p. 715. 723	SC.912.L.17.11, SC.912.L.17.19	What you Need to Know about Energy Energy Video
Molecular clocks	Chapter 23 p. 762	SC.912.L.15.2	
Biotechnology	Chapter 32 pp.774-775	SC.912.L.16.10	Genetic Science Learning Center
Environmental Impact	Elemental Handbook pp. 805, 836, 815	SC.912.L.17.15 SC.912.L.17.16, SC.912.L.17.20	Oil Slick Satellite Image Water Science for Schools