

The Westminster School at Oak Mountain  
Chemistry Syllabus (2017-2018)

Class: Chemistry Adv. – 1<sup>st</sup> Period GL – 2<sup>nd</sup> Period

Text: CK-12 Chemistry - students owned. The 3-ring binder provided will allow the student to carry the text (only the pertinent portions) to class. They are allowed to write and take notes in the book.

Online: <http://www.ck12.org/book/CK-12-Chemistry-Concepts-Intermediate/>  
The online version is continually being updated, so some of the chapters and information will change slightly. This does not affect the quality of the content. The order of the chapters will be changed based on the needs of the class.

Purpose:

The goal of this course is for the students to gain a greater appreciation of the world that God has made. Even though the world is sometimes hostile to the Biblical view of the Sciences, we pray that our students will become skilled at using common chemical information to further the cause of Christ. Using their rhetorical skills (papers, laboratory write-ups, and presentations) students must be prepared to defend their position from all angles, as issues in Chemistry (environmental impact of chemicals, cancer treatments, climate change...) continue to make headlines. The curriculum will cover the nature of matter (atoms, molecules...), how they interact (chemical reactions), heat, phases of matter, stoichiometry (amounts of reactants and products), electrochemical and nuclear reactions. Our Chemistry classe requires a good working knowledge of Algebra I to complete the mathematical problems.

Assessments:

Tests:	55%	At least 3 (100 point) per 9 weeks
Projects:	15%	
Labs:	20%	5-6 per 9 weeks
Homework:	10%	

Units:

1<sup>st</sup> quarter

- The Science of Chemistry
- Measurements
- Matter and Change
- The Atom
- Electrons and Their Configurations

2<sup>nd</sup> quarter

- The Periodic Table
- Ions and Their Compounds
- Covalent Bonding
- Molecular Architecture
- Intro to Organic Chemistry

### 3<sup>rd</sup> quarter

Applications of Organic Chemistry - Petroleum  
Chemical Reactions / Equations  
Stoichiometry  
Phases of Matter  
Solutions

### 4<sup>th</sup> quarter

Equilibrium  
Acids/Bases - pH, Titration  
Thermodynamics  
Electrochemistry  
Nuclear Chemistry

#### Homework and Laboratory write-ups:

All homework and lab write-ups will be in a quadrille (graph paper) composition style notebook. It will be used almost daily and turned in weekly, so they need to be brought to class every day.

#### Projects:

Q1: Position paper on environmental issues – Due September 28, 2017

Q2: Video analysis – Due December 4, 2017

Q3: Research on impact of petroleum – Due February 7, 2018

Q4: Experiment – Due April 25, 2018

#### Classroom Procedures:

A) Because my class meets in the Chemistry Lab, there are a few things that are to be avoided:

- 1) No student is allowed in the Preparation Room without permission.
- 2) No student is allowed to “cut thru” to Mr. Thompson’s room through the Prep Room.
- 3) Anything that is out in the room from another class is to be avoided.
- 4) There are things in the room that can be touched and played with, and those will be delineated as they appear in the room.

B) I desire that the student do all work without help from others. This trains them to be independent and make their work their own. There will be times where they can work together as well, during those times they need to acknowledge the group. When any research is done, they will need to give credit to those that have helped them (i.e. websites, articles, books...). This avoids plagiarism, which is claiming something to be your own thoughts when they are not. I will help them learn this during the project phase of the class. Plagiarism and cheating will be referred to the Dean of Students.

- C) There will be times that the students will forget to do homework or will turn in a project late. The penalty for late projects or papers is 11% per day. Homework can be made up within 24 hours for  $\frac{1}{2}$  credit. All work must be completed, even if there are no points available. If they have not completed the work, they will receive an “incomplete” on their report card.
- D) Students will get sick and miss class, so the school has a policy of giving two days to complete an assignment for each day missed. At that point deductions will start (see late assignments above). A student that is tardy to class will receive a referral and the Dean of Students will handle the situation.
- E) There is a makeup work folder in the front of the room.

Dale Carrell  
Chemistry Teacher