Course Outline

Chemistry 2019-2020

Citrus Valley High School

**Instructor:** Dr. Stover **Email**: michelle\_stover@redlands.k12.ca.us **Classroom:** E144 **Ext#:** 35544

**Letter to Parent(s)/Guardian:**

Welcome to Chemistry. My name is Dr. Stover and I will be your son’s/daughter’s Chemistry teacher this year. I am delighted to have your student in my class. I plan to help all my students acquire a deep and rich understanding of chemistry and of its reallife application around them. I want to teach them the knowledge and skills they need to gradually transition from school work to real world work in order to become responsible young adults. I am looking forward to working with you to make this school year an excellent learning experience for your student.

**About Chemistry:** Chemistry is a college preparatory science course. Because the study of chemistry is an abstract subject, students may feel a greater sense of anxiety than in previous high school course work. Many students feel overwhelmed and find it difficult to keep up. It is essential that students attend class every day and arrive on time and prepared. Students should be studying **every night** whether or not a specific assignment has been given.

**Course Textbook:** Modern Chemistry by Sarquis and Sarquis

**Additional Resources:** Modern Chemistry Performance Expectations Guide

Modern Chemistry Engineering Design Guide

ChemQuest

POGIL

**Online Resources: dosctover.org (class website)**

**sciencegeek.net (interactive review)**

**Ed: Your Friend in Learning**

**Required Materials:** Five-Subject Spiral Bound Notebook

Dark blue or black pens, #2 pencils

Highlighter (any color)

Red Pen

Loose leaf paper

Scientific Calculator

Elmer’s Glue Sticks

**Class Rules:** Department, school, and district rules and procedures are strictly enforced in the classroom and campus at all times.

1. All students are expected to follow the school-wide classroom policies.
2. Be on time to class. You must be in the room and in your seat at the time the bell rings.
3. Bring required materials.
4. Respect other students, the teacher, aides, and the classroom environment as a whole.

- If any student persists in the inhibition of the learning of other students, he/she will be removed from the class.

-Please keep all music devices, cellular phone and other electrical devise -There is no grooming in the classroom, items will be confiscated.

1. Please follow teacher’s directions and exhibit an on-task behavior

-Students must know and shall follow correct laboratory safety procedures.

1. Absolutely no cheating.

-**Any form of talking** during a test is considered cheating.

Those who violate this rule will automatically get zero and will be held accountable to the fullest extent.

**Grading System**: Grades are calculated as an average of total points earned over points as follows:

**Assessment (unit or chapter tests) 45%**

**Classwork (quizzes, group work, labs, class activities/projects, ) 20%**

**Interactive Notebook (INB) 25%**

**Final Exams = 10%**

An overall grade from:

100%-97% is an A+; 94%is an A; 93-90% is an A-;

89%-87% is a B+; 86%-84% is a B; 83%-80% is a B-;

79%-77% is a C+; 76%-74% is a C; 73%-70% is a C-; 69% and below is a non-proficient grade.

**Interactive Notebook (INB)**: All notes are posted on the class website. Students will create their own notes on their spiral notebook. They will be graded on the posted due date. **NO LATE NOTES. After a week that the INB is not turned in, a grade of zero will be given.**

**Absences**

Daily attendance is essential because each lesson is important in understanding succeeding lessons. For excused absences, students will be given **one day** to complete work missed. After that day**, late work gets half a credit***.* **After the first week, late work will not be accepted and will get a grade of zero*.***  Weekly calendar will be provided on the class website and in class so that students don’t fall behind. Everyone is expected to come prepared for the class.

**Assignments:** All assignments must contain a title, name, date, and period in the heading. Homework will be due the following day unless otherwise specified. **Late work automatically gets half a credit. After a week that a homework is not turned in, a grade of zero will be given.**

**Test and Quizzes**: Quizzes will be given periodically and may be announced or unannounced to check for progress. Unannounced quizzes will be taken with open notes. **It is the responsibility of the student to get the notes that were missed during an absence** (**they are posted on the class website**.) Unit tests are given at the end of each unit/chapter. Quizzes may or may not be made up. **After a week that a quiz/test is not made up, a grade of zero will be given.**

**Lab:** Format for writing lab reports must be followed at all times. They are due at the end of each lab, or when specified. Due to the nature of labs, it is extremely important that you be here on lab days. Labs involve chemicals and equipment that may be available on lab days only.

**Project:** A major project (either per individual or as group) may be assigned at least once a semester if time permits.

**Make-up Work**: It is the responsibility of the student to obtain assignments missed due to **excused absences**. **Unexcused absences or truancy** will not be given the opportunity to make up **unless cleared by attendance** All assignments and class work are posted on the website. Make-up homework is due a day after the student returns to class following an absence**.**  **Late work automatically gets half a credit After a week that a work is not made up, a grade of zero will be given.**

**Lab Make-up:** To make up missed lab, the students must find and read one chemistry related article related to the missed lab and write a one page summary of the article. **This is due within the week of the missed lab*.* Late work automatically gets half a credit. After a week that a lab is not made up, a grade of zero will be given.**

**Extra Credit Work:** Some extra credit work will be available throughout the year. Options will be discussed at a later date. **Students must have all required assignments completed before working on extra credit.**

This is the planned schedule for the year. It may or may not work depending on school activities that day. Otherwise, the test dates are set for your planning purposes. Use the resources available to you.

**First Semester**

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| --- | --- | --- | --- |
| **Unit** | **Topics** | **Unit Test Dates** | **Resources to Use** |
| 1 | **Combustion**   * Introduction to Chemistry * Matter and Its Properties * Scientific Method * Units of Measurement * Using Scientific Measurements   **Labs/Activities**  Combustion Lab  Measure, Measure, Measure  Soda Density Lab | 9/11 | Modern Chemistry:  Chapter 1 (Section 1.1 and 1.2)  Chapter 2  Chapter 8 (Section 8.1)  Chapter 16 (Section 16.1)  Worksheets:  ChemQuest  POGIL  Online:  Class website  pHet simulations  Ed: Your Friend in Learning |
| 2 | **Atoms**   * Atomic Theories * The Structure of the Atom * Counting Atoms * The Development of New Atomic Model * The Quantum Model of the Atom * Electron Configurations * History of the Periodic Table * Electron Configuration in the Periodic Table * Electron Configuration and Periodic Properties * The Nucleus * Radioactive Decay * Nuclear Radiation   Lab/Activities:  M & M Model of the Atom | 10/11 | Modern Chemistry:  Chapter 3  Chapter 4  Chapter 5  Chapter 21  Worksheets:  Class website  ChemQuest  POGIL  Online:  pHet simulations  Ed: Your Friend in Learning |
| 3 | **Chemical Reactions**   * Introduction to Chemical Bonding * Covalent Bonding and Molecular Compounds * Ionic Bonding and Ionic Compounds * Metallic Bonding * Molecular Geometry * Chemical Names and Formulas * Oxidation Numbers * Using Chemical Formulas * Determining Chemical Formulas * Describing Chemical Reactions * Types of Chemical Reactions * Activity Series of the Elements * Introduction to Stoichiometry * Ideal Stoichiometric Calculations * Limiting Reactants and Percent Yield * Macromolecules   Labs/Activities:  Types of Chemical Reactions  Mole Stations Lab  Stoichiometry of S’mores | 11/29  12/4 | Modern Chemistry  Chapter 6  Chapter 7  Chapter 8  Chapter 9  Chapter 22  Worksheets:  ChemQuest  POGIL  Online:  Class website  pHet simulations  Ed: Your Friend in Learning |

**Second Semester**

|  |  |  |  |
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| **Unit** | **Topics** | **Unit Test Dates** | **Resources to Use** |
| 4 | **Heat and Energy in the Earth’s System**  **and Reaction Energy**   * Thermochemistry * Driving Force of Reactions * The Reaction Process * Reaction Rate   Lab/Activities:  Calorimetry Lab  Rate of Reaction | 2/6 | Modern Chemistry  Chapter 16  Chapter 17  Worksheets:  ChemQuest  POGIL  Online:  Class website  pHet simulations  Ed: Your Friend in Learning |
| 5 | **Atmosphere/Gas Laws**   * Gases and Pressure * The Gas Laws * Gas Volumes and Ideal gas laws * Diffusion and Effusion * Types of Mixtures * The Solution Process * Concentration of Solutions   Labs/Activities:  Gas Law Station Lab  Molar Volume of Gas  Molarity Lab | 3/4 | Modern Chemistry  Chapter 11  Chapter 12  Worksheets:  ChemQuest  POGIL  Online:  Class website  pHet simulations  Ed: Your Friend in Learning |
| 6 | **Equilibrium/Acids and Bases**   * Properties of Acids and Bases * Acid-Base Theories * Acid-Base Reactions * Aqueous Solutions and the Concept of pH * Determining pH and Titrations * The Nature of Chemical Equilibrium * ShiftingEquilibrium * Equilibria of Acids, Bases and Salts * Solubility Equilibria * Oxidation and Reduction * Balancing Redox Reactions | 5/13 | Modern Chemistry  Chapter 14  Chapter 15  Chapter 18  Chapter 19  Worksheets:  ChemQuest  POGIL  Online:  Class website  pHet simulations  Ed: Your Friend in Learning |

Please keep this in your “Science Binder” at all times. This is worth 10 pts of participation.

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**Sign Sheet Section to be turned in**

Please fill in the following information and provide phone number(s) where I can contact you or leave a message concerning your student. Please include email if available because I find this a very useful tool of communication also.

Student’s name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Father’s name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Contact Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Email: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mother’s name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Contact Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Email: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please list any information that I should be aware of that may limit participation in certain class or laboratory activities. Thank you.

# Chemistry

“My son/daughter and I have read the student behavior contract and agree to abide by these rules, or as a parent, help my student to keep these rules by: providing a quiet place for them to work, encouraging them to do their best, complimenting them when they do well, seeing that they get enough sleep at night, and get a nutritious breakfast in the morning.”

Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent/Guardian Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_