**Chemistry Syllabus (school year)**

(school name)

(teacher name & room number)

(email)

(phone number)

 **Course Description**: Chemistry is a branch of science dealing with forms of energy, energy transfer & conservation, properties of matter, and changes in matter. Students will do laboratory work including inquiry, reflection, and social implications. It is necessary to have passed **algebra 1 & 2 with a C** or better in order to successfully complete this course.

**Grading Plan**

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|  **Categories & Weight** Notebook ------}Assignments---} 60%Labs –-----------}Tests/Quizzes – 25% Final Exam – 15%  |

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|  **Scale** A = 100 – 90% B = 89 – 80% C = 79 – 70% D = 69 – 60% E = 59 – 0%  |

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|  Grades will be posted on Synergy, please make sure you have your student/parent password to view your current grade. Included in grades will be class participation, students’ ability/willingness to follow class procedures, laboratory investigations (including lab etiquette and lab journal), and participation in research/presentations.  |

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**Course Specifics:**

 As we strive to increase the level of rigor and prepare our students to compete and be successful in a global economy, students are expected to come to class with their notebook and pencil/pen everyday on time. In the notebook students will include their daily Objective, Do Now, Practice Skill, and Homework along with any necessary notes. Most lab work will be done in a composition notebook, **if the pre-lab is not complete, the student will not be able to do the lab.** All work must be handed in on time, late work will not be accepted, unless the student is absent (please let me know of any extenuating circumstances). For each day a student is absent, the student has that many days to complete the assignment(s), this is not to exceed 5 days. **Makeup tests/quizzes must be taken before or after school, no exceptions.**

**Attendance/Tardy Policy per Semester:** (For detailed information refer to student handbook.)

An absence is arrival to class after the first 20 minutes of the class period or failure to remain in class for at least 30 minutes unless a valid pass is provided by the principal, an assistant principal, counselor, or a teacher. **Any student reaching 15 non-excused absences will have their grade lowered by 1 letter grade**. Illnesses will be excused only with a physician’s note. A maximum of 3 days will be excused with an obituary note for the death of an immediate family member (parent, sibling, and grandparent).

Students must be in the classroom and in their seat when the tardy bell rings. A valid pass can only be provided by the principal, an assistant principal, counselor, or a teacher in order for a tardy to be excused.

3rd Tardy = Referral

4th Tardy = 1 absence with classes closed pending parent conference

5th-7th Tardy = Referral

8th Tardy = 1 absence with classes closed pending parent conference

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| **Classroom** |
| **Procedures**We will listen while teacher or a student is explaining/discussingWe will not eat/drink in class We will not write on desks We will not use cell phones – unless part of class assignment We will not bring jackets/coats to class We will follow Dress Code as Outlined by the District We will not use profanity as it is not professional to do soAs soon as you arrive, begin to write in your notebook  | **Consequences – may include the following, not necessarily in the order given;**Parent/Guardian contact Behavior Specialist Referral After school detention in room \_\_\_\_\_\_Principal Referral  |

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| Course Topics/Units and Approximate Pacing Guide |
| SEMESTER ONE | NGSS | SEMESTER TWO | NGSS |
| Inquiry, Reflection, and Social Implication--all monthsC1.1 Scientific InquiryC1.2 Scientific Reflection and Social ImplicationsScientific Method----------------------------------**Sept**Metric MeasurementScientific NotationSignificant Digits**Unit 1 - Atomic Theory: Physical, chemical and nuclear changes are explained using the location and properties of subatomic particles.**C3.5(a) Mass defectC4.8 (A, B, C) Atomic StructureC4.10 (A, B, C, e) Neutral Atom, Ions, and Isotopes | HS-PS1-8HS-PS1-1 | **Unit 7 – States of Matter---------------------Feb****States of matter can be explained by attraction between particles under various conditions of temperature and pressure.**C2.2 (A, B) Molecules in MotionC2.2 (c) Molecular Entropy C3.3 (A, B) Heating ImpactsC4.3 (A, B) Properties of SubstancesC4.5 (a, b, c) Ideal Gas Law | HS-PS3-2 HS-PS3-2 HS-PS3-2  |
| **Unit 2 - Periodic Table** ----------------------------**Oct****The periodic table organizes all known elements and provides useful information for making predictions in chemistry.**C4.9(A, b) Periodic TableC5.2(g) Balancing Equations C5.5(A, B, d) Chemical Bonds | HS-PS1-1HS-PS1-7HS-PS1-2HS-PS2-6 | **Unit 8 – Advanced-----------------------------Mar****Bonding Concepts: Many physical properties of substances can be determined by knowing the type of intermolecular forces that exists between particles.** C4.3(c, d, f, g) SolidsC5.4 (c, d, e) Changes of State | HS-PS3-2 |
| **Unit 3 - Quantum Mechanics**-------------------**Nov****Quantum theory provides a foundation for the atomic model and understanding of electron behavior and arrangement.**C2.4 (a, c, d) Electron MovementC4.8 (e, f, g, h, ,i) Electron Configuration**Unit 4 – Introduction to Bonding: Attractions between atoms increase their stability.**C2.1(a) Chemical Potential EnergyC3.2 (b, c) Enthalpy Chemical Reactions C4.4 (a, b) Molecular PolarityC5.8 (A, B, C) Carbon Chemistry | HS-PS4-1HS-PS3-5HS-PS1-1HS-PS3-5HS-PS1-3HS-PS2-6 | **Unit 9 – Thermochemistry ------------------Apr****and Solutions: The flow of energy, measured by temperature, influences the behavior of matter.**C3.1 (c, d) Hess’s LawC5.4 (A, B) Phase/Change Diagrams**Unit 10 – Acid/Base: Hydrogen ion concentration determines pH of the solution which allows its classification as acidic, basic, or neutral.**C5.7 (A, B, C, D, E) Acids and BasesC5.7 (g, h) Bronsted-Lowry  | HS-PS3-4HS-PS1-4HS-PS3-1 |
| **Unit 5 – Nomenclature and Formula----------Dec****Stoichiometry: Elements form compounds in predictable ratios that can be named systematically.**C4.1 (a) Molecular Formulae C4.2 (A, B, c, d) Nomenclature C4.6 (a, b) Moles | HS-PS1-7 | **Unit 11 – Redox/Equilibrium---------------May****Electron transfers impacts humans in both positive and negative ways. In a closed system, reversible reactions achieve equilibrium which is dependent on pressure, temperature and concentration conditions.** C5.3 (a, b) EquilibriumC5.6 (c, e) Reduction/Oxidation Reactions | HS-PS1-6 |
| **Unit 6 – Equations and Stoichiometry---------Jan****Chemical reactions are described by balanced chemical equations which obey the Law of Conservation of Mass.**C3.4 (A) Endothermic and Exothermic ReactionsC3.4 (c) Enthalpy and EntropyC5.2 (A, B) Chemical ChangesC5.2 (d) Balancing EquationsC5.6 (b) Reduction/Oxidation Reactions | HS-PS1-4HS-PS3-5HS-PS1-7HS-PS1-2 | **Unit 12 – Thermodynamics------------------Jun****The spontaneity of a reaction is determined by the change in Gibbs free Energy which is dependent on temperature and the changes in enthalpy and entropy.**C3.1 (a, b) Hess’s LawC3.2a EnthalpyC3.4B Endothermic and Exothermic ReactionsC3.4d Enthalpy and Entropy | HS-PS1-4HS-PS1-5 |

**Laptop Cart Procedure**

DISTRIBUTION OF THE LAPTOPS AND THEIR PROPER RETURN TO THE CART:

1. **(teacher name)** will assign a laptop to the student(s). Students will be required to sign-out the laptop and sign it back in when finished.

2. If a laptop is damaged, please contact **(teacher name)** immediately. If not, it will be assumed as your damage. Do not use a damaged laptop.

3. If a laptop will not logon to the network, tell **(teacher name)**, then, restart the laptop. Make sure the wireless switch on the laptop is turned on. The “Wi-Fi” indicator on the laptop will be lit if the switch is on. If the restart did not cure the issue, let **(teacher name)** know.

**4. Never download any games or music or plug anything other than the USB flash drive into the laptop. Failure to follow these procedures will result in future laptop problems.**

5. When you are finished with the laptop, make sure you logoff and **SHUT DOWN** the laptop. Laptops that are not **SHUT DOWN** properly can result in future problems. **The laptop should be completely off before it is placed back on the cart.**

6. Please make sure each laptop is properly returned to the correct shelf on the cart.

**Chemistry Syllabus (school year)**

(school name)

(teacher & room number)

(email)

(phone number)

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(email)

(phone number)

**All students are required to return this form!**

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Print Student’s Full Name

Parent/Guardian’s Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Home Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cell Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

E-mail Address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Please read the entire syllabus, sign and return.**

**I have read and understand the classroom and laptop rules and know what is expected.**

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Parent Signature

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Student Signature

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

Any comments the instructor should know:

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**Chemistry Syllabus (school year)**

(school name)

(teacher & room number)

(email)

(phone number)





**HCS** (Hazard Communication Standard) **Pictograms & Hazards**

 



**Safety Contract (school year)**

**(school name)**

**(teacher name & room number)**

**(email)**

**(phone number)**



**Student Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Student Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Parent/Guardian Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**