**Chemistry**

Course Syllabus

2016-2017

**Teacher:**  Kasie Kieffer

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**Office Hours:** 7:30-8:00 AM, 11:12-12:43PM and 3:55-4:10PM

**Course Description**:

Course Overview:  Chemistry describes the properties and changes that occur in matter.  This is an inquiry based course that examines matter and the changes it undergoes.  Experiments and activities are used to introduce concepts including the structure of atoms and chemical compounds, the relationships among the elements on the periodic table, chemical and physical transformations, and the measurement and calculations of chemical quantities.  Chemistry impacts many aspects of our everyday lives.  Students who complete this course will develop an understanding of interconnections among sciences, technology, and the environment.  They will also be able to apply chemical principles to basic problems.

The Chemistry course of study includes:

* Measurements and Units
* Energy, Heat, and Temperature
* Atoms and Molecules
* Classifying Matter and Its Changes
* Counting Molecules and Atoms
* Stoichiometry
* Atomic Structure
* Molecular Structure
* Polyatomic Ions and Molecular Geometry
* Acid/Base Chemistry
* Chemistry of Solutions
* The Gas Phase
* Thermodynamics
* Kinetics
* Chemical Equilibrium
* Reduction/Oxidation Reactions

**Course Materials:**

1-3” 3 ring binder notebook or digital notebook.

Pencil

Paper

Calculator (Not Required but suggested)

**Course Requirements:**

*Test & Quizzes:* Tests and quizzes are used as formative and summative assessment of student learning. Quizzes will be given throughout the units to check for student understanding. Tests will be given at the end of each unit to check for content mastery. These will be worth 25% of grade.

*Activities:* Activities develop technical skills and knowledge through prescribed exercises in applied mathematics and science problems, materials processing, labs and experiments, and software simulations. Activities are a structured approach to reinforce general knowledge or skills necessary for use in larger projects. The whole class will get to predetermined outcomes as planned. All activities to be completed will be evaluated and will be worth 25% of your class grade.

*Projects:*  Projects utilize prescribed problem solving statements, goals, and constraints. They hone skills in sketching, creativity, materials processing, teamwork, software usage, time management, and communication. Results of projects develop similar conclusions, but the path to discover the conclusion may vary greatly. Students synthesize knowledge and create something new with what they have learned through a guided inquiry approach. Each project will be graded using a rubric and will be worth 25% of your class grade.

*Problems*: Problems require students to identify needs, establish goals and constraints, seek knowledge via research, synthesize new knowledge, tackle project management issues, take risks, work with others, develop student understanding, and reinforce critical thinking skills needed in future careers. Problems are more about the process than a specific answer. They remove the cap on what students can learn using open inquiry. Problems will be graded using an assessment guide that focuses on:

* Knowledge and Understanding
* Process and Problem Solving
* Communication, both written and spoken

Problems will be worth 25% of your class grade.

**Grading/Evaluation:**

Test / Quizes 25%

Activities 25%

Projects 25%

Problems 25%

 A = 90 – 100

B = 80 – 89

 C = 70 – 79

 D = 60 – 69

 F = Below 60 (failing, no credit for semester)

Please keep in mind that grades are EARNED by you and they are not given. School is like a job and grades are your pay, in lieu of money. If you were graded at work, you would be receiving the following for your grades.

* A - Promotion to the next highest position and receiving the maximum amount of raises in one calendar year.
* B- One raise at the minimum amount in one calendar year.
* C- Stay where you currently are in the company.
* D- Demotion to the next lower position and your pay may be cut.
* F- Fired from the company.

**Late Assignment Policy:**

Late work will be accepted up until the end of a nine-week period. Anything turned in late will be docked 20%. Natural consequences will be the punishment for late work as well. Assignments are put into place to help prepare you for the tests and quizzes; they are a form of formative assessment that allows me to see where you are struggling. If you do not complete assignments when they are due you will constantly be playing catch-up, and will not do well on the quizzes and tests assigned.

**Extra-Credit:**

Extra - Credit will be at the teacher’s discretion. No extra-credit will be available if there are any missing assignments. Projects and or research are options you need to discuss with the teacher.

**Absence/Makeup policy:**

If student is absent they need to get their assignments from CASE Online. If they have questions they need to meet with the teacher before or after school. Refer to the late policy for making up work. Labs are very specific, and not always replicable for individual purposes. If a lab is missed student needs to get with teacher for an alternate assignment.

**Academic Honesty:**

A standard of honesty, fairly applied to all students, is essential to a learning environment.  Students must understand and abide by the academic honesty policy outlined in the handbook.  Disregard for this policy is a choice to accept the consequences and penalties associated with such behavior.