**Northwest Magnet High School**

**Honors Chemistry 1-2**

**Course Syllabus 2016-17**

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| **Instructor:** | Rachel Benzoni |
| **E-mail:** | rachel.benzoni@ops.org |
| **Plan Periods:** | 5th and 8th |
| **Office/Classroom:** | Math-Science Plan Center/Room 202 |

**Course Description**

This course engages students in both theoretical and practical problem-solving strategies as they investigate chemical issues that are relevant to their daily lives. Topics of study include: laboratory processes, chemical safety, atomic structure, properties of matter, and chemical reactions. This course meets the district requirement for a third year science elective.

**Instructional Philosophy**

Today’s students will grow up to be adult members of our society and I believe that not only is it my responsibility to prepare them for their future academic endeavors but to also provide them a knowledge base so they have a basic scientific knowledge to draw on throughout their lives. I provide all the tools which my students need, but I expect them to use these tools in order for them to succeed.

**Major Units of Study (timeline is subject to change)**

Semester 1

* Policies, Procedures, Safety, Scientific method
  + Introductory lessons
  + Content based math & inquiry skills
    - Significant figures and units of measurement
    - Accuracy/precision and percent error
    - Density
    - Scientific notation and dimensional analysis
* Atomic Structure and Radioactivity Unit
  + Atomic models and subatomic particles
  + Unique traits of elements and atomic stability
* Periodic Table Unit
  + Periodic trends and prediction of element traits
* Bonding and Nomenclature unit
  + Bonding in ionic compounds & covalent compounds
  + Lewis structures and Valence Shell Electron Pair Repulsion shapes
  + Multiple bonds and resonance
  + Naming and writing formulas of ionic compounds and covalent compounds
  + Transition metals and polyatomic ions
* Chemical Reactions Unit
  + Balancing reactions and reaction types
  + Reaction rates
* Finals Week

Semester 2

* Chemical Composition Unit
  + Molar mass and counting by mass
  + Avogadro’s number and molar relationships
  + Percent composition and empirical/molecular formulas
* Stoichiometry Unit
* Solutions Unit
  + Acid/base reactions
  + Precipitation reactions
  + Equilibrium
* Gas Laws Unit
  + Temperature and pressure conversions
  + Relationships between: temperature, pressure, volume and moles.
  + Boyle’s, Charles’s, Avogadro’s, Ideal, Dalton’s Laws and possibly others
* Finals Week

**Course Expectations**

* Complete coursework, both in and out of class, in a timely fashion.
* Participate during in-class discussion and cooperative learning opportunities.
* Complete formal lab write-ups.
* Create technology based projects and presentations.

**Class Rules and Expectations**: ***Be Safe, Be Respectful, Be Responsible***

* Rules and guidelines set forth in the student handbook will be followed in this class. Any student who distracts other students or the instructor interferes with the learning environment and should expect consequences.
* Attendance: Being in class, on time, is important for student success. Anyone entering the classroom after the bell has stopped ringing is tardy.
* Electronic Devices: No electronic devices (cell phones, mp3 players, games, etc.) are permitted to be seen, heard, or used in the classroom at any time.

**Safety Expectations**

Chemistry is a lab-based course with safety as an essential component. The safety guidelines support and encourage an investigative approach and laboratory instruction, while at the same time assisting in the development of a safe learning environment. Students will follow the Omaha Public Schools district guidelines on safety that is published in the science safety contract. Students will be provided a copy of the guidelines. The students, parents and/or guardians are expected to read the guidelines and sign and return the signature portion of the contract. The student will not be allowed to participate in the lab activities until the signed contract is returned.

**OPS Secondary Grading Practices**

All coursework and assessments are judged based on the level of student learning from “below basic” to “advanced.” This course will provide multiple opportunities to achieve at the “proficient” to “advanced” levels. Students are evaluated based on a proficiency scale or project rubric. Proficiency scales for this course are available upon request.

**Grading Weights**

Formative 35% of final grade

Summative 65% of final grade

At the end of the grading period, scores are converted to a letter grade using this grading scale.

A = 3.51 – 4.00 A-= 3.01 – 3.50 B = 2.51 – 3.00 B-=2.01 – 2.50 C = 1.51 – 2.00 D = 0.76 - 1.50 F = 0.00 – 0.75

**Redoing/Revising Student Coursework**

1. Students are responsible for completing all coursework and assessments as assigned.
2. Students will be allowed redos and revisions of coursework for full credit as long as they are turned in during that unit of study while a student still has an opportunity to benefit from the learning. When time permits, teachers should allow the redoing or revising of summative assessments.
3. Students are expected to complete assessments when given to the class, or if a student was justifiably absent, at a time designated by the teacher.
4. Redoing, retaking or revising will be done at teacher discretion in consultation with the student and parent(s). Teachers may schedule students before, during, or after school to address needed areas of improvement if not convenient during class. The time and location for redoing, retaking or revising will be done at the teacher’s discretion in consultation with the student and parent(s).
5. Scores for student work after retaking, revising or redoing will not be averaged with the first attempt at coursework but will replace the original score.