

Pre-AP Chemistry 2018-2019 Syllabus

Mr. Beeman
Santa Fe High School
Classroom Policies and Procedures

The following topics were covered with your child during class:

Attendance/Make-Up Procedure

Class Materials

Extra Help/Tutorials

Classroom Expectations

Grading

Progress Reports

Additional Information

Please review the attached information with your child, sign the top sheet and return it to the teacher.

You will be able to access your child's grade online anytime.

Parent Signature_____

Student Signature_____

Date_____

**Welcome to Pre-AP Chemistry with Mr. Beeman
Santa Fe High School 2018-2019**

Course Overview: Pre-AP Chemistry will be one of the hardest courses you will take in high school. Many sophomores struggle with the course because it is the first time they have ever had to apply mathematics to real world problem solving situations, including the practical use of Algebra. It is also a course that requires a great deal of abstract thinking, visualization in three dimensions, and the use of logic and critical thinking skills. The goal of Pre-AP Chemistry is to provide students with a foundation to understand the structure and properties of chemical substances and to make predictions in regards to the movement of energy in a system. This course is designed to give you the background and skills to prepare you for more advanced science classes, such as AP Chemistry, AP Environmental Science, and/or AP Biology. By nature, this course is lab-based with special emphasis on quantitative and qualitative methods of analysis. This is a very easy course to fall behind in quickly if you are not prepared and do not keep up with the pace of the course. Pre-AP Chemistry is a first-year chemistry course designed to meet the needs of the student who plans on continuing on in AP Chemistry or eventually taking a college chemistry class.

Mr. Beeman's Contact Information:

Email: adam.beeman@sfisd.org

Class Phone: 409-927-3183

Remind 101: Text @beepapchem to 81010

Mr. Beeman's Schedule:

1st Period 7:05 -7:55	Chemistry
2nd Period 7:59 – 8:49	Chemistry
3rd Period 8:53 – 9:48	Chemistry
Advisory 9:52 – 10:27	Advisory
4th Period 10:31 – 11:21	Chemistry
A Lunch 11:21 – 11:51	A Lunch
5th Period 11:55 – 12:45	Chemistry
6th Period 12:49 – 1:41	Conference
7th Period 1:45 – 2:35	PAP Chemistry

Tutorials: Tuesdays & Thursdays 2:30 – 3:15

Class rules

1. Listen carefully and follow directions
2. Raise your hands to speak
3. Respect others
4. Use kind words
5. Always do your best
6. Help each other
7. Treat others as you want to be treated
8. Ask questions

9. Cellphones may only be used with teacher permission

Cell phone policy: If a device is out in class when it is not supposed to be, the first time it is seen will be a warning, the second time the teacher will take up the device till the end of class, and the third time the teacher will take up the phone and hand it into the office. Students will have to pay a fine of \$15 to receive their device back at the end of the day. Any further violations of the policy will see an automatic device sent to the office for a fine to receive it back and possible further consequences.

Consequences:

1. Verbal Warning
2. Teacher/Student Conference
3. Parent Contact (Detention)
4. Parent Conference
5. Referral
 - a. May skip steps depending on severity

Course Content: The following units will be covered in this course.

Unit 1: Math and Measurement

Unit 2: Matter Classification & Graphing Calculator Techniques

Unit 3: Atomic Structure

Unit 4: The Modern Atom

Unit 5: Periodicity

Unit 6: Bonding

Unit 7: Molecular Structure

Unit 8: Chemical Nomenclature

Unit 9: Chemical Calculations

Unit 10: Chemical Equations

Unit 11: Stoichiometry

Unit 12: Solutions

Unit 13: Thermochemistry

Unit 14: Acid/Base

Unit 15: Gas Laws

Unit 16: General Equilibrium

Unit 17: Nuclear

Textbook: *Pearson, Chemistry*

Required Materials:

- College ruled composition or spiral notebook – the more pages, the better!
- Writing utensil
- Calculator for homework use

Optional Materials:

Students may bring in one of these materials for extra homework grade (Maximum of 1 extra homework grade).

- Tissue Box
- Paper Towel Roll
- Glue Bottle

Grading: Your grade will be determined on the following scale:

Major Grades (Tests, Major Projects, etc.) ----- **60%**
Labs/Quizzes----- **30%**
Daily Work (Daily Assignments, Homework) -----**10%**

Progress Reports: Progress reports will be given to students during advisory period.

Homework: Homework will sometimes be graded in class for immediate feedback, after checked for completion. Students will not have assignments returned to them, however will be able to come see their graded assignments if they so choose. *If homework is not done, the quizzes and tests will be impossible!!!!*

Assignments: A tentative calendar will be posted in my classroom every unit with all assignments, quizzes, and tests listed. It is the students' responsibility to keep up with the calendar and anything listed on it. Any changes that need to be made to the calendar will be announced in class.

Make-up Work: Students may check their grades at any time on student access. Make-up assignments must be turned in within 48 hours of absence and labs must be made up within 1 week. Any incomplete work will at that point result in a zero. If there are extenuating circumstances, the student must individually approach the instructor and make other arrangements. Ultimately, it is the students' responsibility to get the make-up work completed quickly.

Students will also be responsible to take any quiz or test scheduled on the day they return from an absence if no new material was covered in regards to that quiz/test. Students who miss the day of the quiz or test need to expect to make them up the day they return either during advisory or after school.

Tardiness: You will be counted tardy if you are not in the classroom when the bell rings. I am an instructor who takes tardiness seriously and makes no exceptions unless the student has a pass from another teacher or principal. After a certain number of tardies, your Assistant Principle will deal with you accordingly.

Lab Discipline: Students must return their signed safety contract and pass a laboratory safety test to participate in lab activities. Students will receive a warning for any lab safety violation. Any repeated violation will result in removal from lab and the student will have to write a paper for the remainder of the lab assignments. Safety in lab is most important.

Pre-AP Chemistry Timeline (Subject to change)

1st Nine Weeks

Unit 1 - Math and Measurements

- Lab safety, techniques, and equipment
- Scientific notation
- Significant figures/math operations
- Metric prefixes
- Factor analysis
- Percent calculations

Unit 2 - Matter Classification/Graphing Techniques

- Density
- Graphing by hand
- Classification of matter

Unit 3 - Atomic Structure

- Nuclear composition
- Isotopes and nuclide symbols
- % abundance
- Atomic structure experiments
- Bohr atom
- Periodic structure
- Light behavior and equations

2nd Nine Weeks

Unit 4 - The Modern Atom

- Major atomic theories
- Quantum numbers
- Orbital shapes
- Pauli's exclusion
- Electron configuration
- Lewis dot diagrams
- Recognizing excited states

Unit 5 - Periodicity

- Predicting oxidation states
- Size of atoms and ions
- First and multiple ionization energies
- Electronegativity
- Metallic character
- Reactivity

Unit 6 - Bonding

- Lewis dot diagrams of molecules
- Exceptions to the octet rule

Unit 7 - Molecular Structure

- Molecular geometries
- Bond angles and polarity

3rd Nine Weeks

Unit 8 - Chemical nomenclature

- Binary molecular nomenclature
- Binary ionic nomenclature (mono/multivalent)

Unit 9 - Chemical Calculations

- Mole concept
- 2 step mole problems
- % Composition
- Empirical formulas
- Molecular formulas

Unit 10 - Chemical Equations

- Balancing and writing equations
- Recognizing types of reactions
- Predicting products
- Net ionic equations

Unit 11 - Stoichiometry

- Mass-mass problems
- % Yield calculations
- Energy calculations
- Mass-volume problems
- Volume-volume problems
- Limiting reagent problems

Unit 12 - Solutions

- Phase diagrams
- Molarity
- Units of concentration
- Saturated, unsaturated, supersaturated

Unit 13 - Thermochemistry

- Heat transfer and calculations
- Enthalpy
- Hess's Law
- Gibbs free energy and thermodynamic favorability
- Endothermic and exothermic

4th Nine Weeks

Unit 14 - Acids, Bases, and their Equilibrium

- Acid nomenclature
- Base Nomenclature
- Balancing redox in basic and acidic solutions
- pH scales and calculations
- Weak acid pH calculations
- Titrations and calculations
- Conjugate Acids and Bases
- Determining oxidation numbers

Unit 15 - Gas Laws

- Boyle's law
- Charles's law
- Avogadro's law
- Dalton's law of partial pressure
- Ideal gas law
- Combined gas law

Unit 16 - General Equilibrium

- Concept of equilibrium

- LeChatlier's principle
- Equilibrium constant calculations
- Equilibrium calculations (RICE)

Unit 17 - Nuclear Chemistry

- Half life
- Types of decay
- Fission Fusion
- Balancing nuclear reactions