Mr. Doolan – Room 310 **Wylie HS**

AP Chemistry Syllabus

The intent of this class is to focus on problem solving techniques and information to prepare you to pass the AP Chemistry exam! Theresa Amabile, Harvard University professor, states that creativity arises through the confluence of knowledge, creative thinking skills and motivation. This course will provide knowledge generally covered in a first year science majors General Chemistry class. Science-based creative thinking skills will be at the heart of the teaching so that you will develop your ability to think clearly, logically and express your ideas many different ways. Intrinsic motivation is up to you, the student! The more motivated you are to learn independently and think creatively the more likely you are to obtain a higher level of gratification, a deeper understanding of the world in which you live and most "unimportantly" a higher score on the AP exam. After all…

"Creativity is just intelligence having fun!" -- Albert Einstein

The course will be centered around six big ideas:

Big Idea 1: The chemical elements are fundamental building materials of matter, and all matter can be understood in terms of arrangements of atoms. These atoms retain their identity in chemical reactions.
Big Idea 2: Chemical and physical properties of materials can be explained by the structure and the arrangement of atoms, ions, or molecules and the forces between them.
Big Idea 3: Changes in matter involve the rearrangement and/or reorganization of atoms and/or the transfer of electrons.
Big Idea 4: Rates of chemical reactions are determined by details of the molecular collisions.
Big Idea 5: The laws of thermodynamics describe the essential role of energy and explain and predict the direction of changes in matter.
Big Idea 6: Any bond or intermolecular attraction that can be formed can be broken. These two processes are in a dynamic competition, sensitive to initial conditions and external perturbations.

Materials Needed:

3 ring binder or folders with brads

Grading:

Please see attached grading policy

Class Website:

There is a class website where all lecture videos, tutorial videos and most assignments can be found. Parents may follow along with the class by checking the calendars and assignments on the site. Students will need to commit the url to memory. If you do not have internet access at home you need to see me after class as students will be expected to access the site from home on a regular basis!

Website address: www.doolanchemistry.com

Online Textbook Website:

https://openstax.org/details/books/chemistry

Course Expectations:

1. **ALL** students will be expected to watch lecture videos outside of class time. This will be the student's responsibility. There will be computers made available after school in my classroom and in the library for students that do not have internet access at home. There will be no formal lectures in class so successful students will need to watch them at home!
2. Work will be graded on correct problem solving methods and not strictly on the answer. Most answers will be provided to students before work is turned in. It will be important for the student to focus on understanding the problem solving method and not strictly on completing the assignment.
3. All tests are closed book and notes. As Chemistry is a course that builds upon itself, **tests and quizzes are cumulative**.
4. Students are expected to take notes, be attentive, contribute to the class, and turn in all assignments completed. Although extra credit is rarely given, students that honestly try and cooperate will always be given consideration when borderline grades occur.
5. Labs are very serious and each student is expected to follow the South Garland Laboratory Safety policies. For safety reasons, failure to follow teacher directives will result in the removal of the student from the lab area and **alternative written work** will be assigned for the remainder of the semester for each laboratory investigation thereafter.
6. For each lab there will be a pre-lab assignment designed to familiarize the student with the lab procedures, safety protocols and calculations involved with a lab. Only students that have completed the pre-lab assignment will be allowed to perform labs.
7. We will move forward every day! If you are absent it is your responsibility to obtain missing work. Yes, if you are absent you will miss work! If you are absent the day before a test or quiz you will still be required to take the test/quiz as these are announced well in advance.
8. **Grades are the student's responsibility.** Students and parents are expected to open an online grade book account to keep up with their grade progress and assignments.