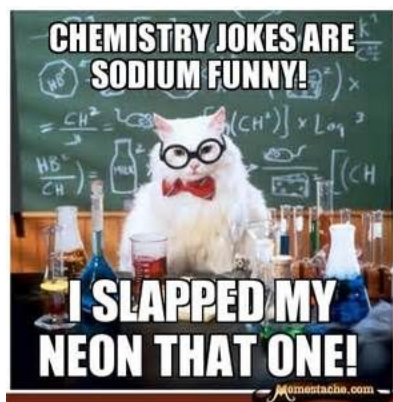


Welcome to General Chemistry



Chemistry is the study of matter and the changes it goes through. I believe the difficulty lies in the fact that much of what we learn is invisible to us. We will work to create models to assist in our understanding of topics.

Core Ideas from the Next Generation Science Standards

Matter and its Interactions:

- Each atom has a charged substructure consisting of a nucleus, which is made of protons and neutrons, surrounded by electrons.
- The periodic table orders elements horizontally by the number of protons in the atom's nucleus and places those with similar chemical properties in columns. The repeating patterns of this table reflect patterns of outer electron states.
- The structure and interactions of matter at the bulk scale are determined by electrical forces within and between atoms.
- Attraction and repulsion between electric charges at the atomic scale explain the structure, properties, and transformations of matter, as well as the contact forces between objects.
- A stable molecule has less energy than the same set of atoms separated; one must provide at least this energy in order to take the molecule apart.
- Chemical processes, their rates, and whether or not energy is stored or released can be understood in terms of the collisions of molecules and the rearrangements of atoms into new molecules, with consequent changes in the sum of all bond energies and changes in kinetic energy.
- The fact that atoms are conserved, together with knowledge of the chemical properties of the elements involved, can be used to describe and predict chemical reactions.

Energy

- Conservation of energy means that the total change of energy in any system is always equal to the total energy transferred into or out of the system.
- Although energy cannot be created nor destroyed, it can be converted into less useful forms - for example, to thermal energy in the surrounding environment

Waves

- The wavelength and frequency of a wave are related to one another by the speed of travel of the wave, which depends on the type of wave and the medium it is passing through.

Expectations

Mrsstowell.weebly.com is my website with helpful tools for you to master the learning goals.

I will provide you with a self-assessment sheet for each objective. If you are mastering the content and achieving all of the learning goals, you may not need to use every step I've outlined for success. However....if you are not seeing success, refer to your self assessment sheet to see how you could improve your study skills. **Everyone needs to use these sheets if they plan to take advantage of the quiz/test retake option.**

Coursework

- I will assign sections of the text for you to study before I explain the content in class. Studying means more than just reading the information. To effectively study:
 - 1) Look over the guided reading questions for the assigned section.
 - 2) Read the section.
 - 3) Take notes on the section.
 - 4) Analyze any example problems within the assigned text.
 - 5) Answer the concept practice questions in writing. CHECK your answers with the solutions in the back of the book.

Many students choose to skimp on effort in studying because I don't enter a grade for it in Skyward. I do observe and document your quality of studying.

There may be a 4 point reading check after an assignment to study that IS entered into Skyward.

- Homework will be assigned and is usually just checked for completion before we correct in class together. If you are not finished, you will be sent out to the hall while we correct and you will have to finish it on your own, putting you at the disadvantage of not watching solutions.

I may collect homework on occasion to grade for effort and mastery.

- Exit tickets are items that I grade for your mastery of the learning goals. These are not announced and can include anything we've covered for the entire class (Semester 1 content can appear on Semester 2 Exit Tickets).

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- During the daily coursework is the time to seek extra help from me. Use class time while I am present to help you. Try the homework - even if you are unsure, and pay close attention when we correct. If after correcting, you are still confused, come see me right away at chieftain time. Do not procrastinate.

- You MUST have a scientific calculator that will perform exponent function. You cannot use your phone, you cannot borrow a calculator from someone else in the class, you cannot borrow a calculator from Ms. Witt or myself. A calculator is required for this class and it is best if you are familiar with your calculator. If you taking physics next year, the same calculator is needed. I will monitor your calculator presence. It is not difficult to acquire this \$10 calculator. Make it a priority and figure it out.