

Chemistry 2019-20 with Mr. Stroup

Mrstroupscience.org • dstroup@pps.net

Course Description:

NGSS chemistry is a year-long course that engages students in the composition, interactions, and mathematical representations of matter. A multi-dimensional teaching approach offers a grounding experience that connects material to real-world phenomena.

Course Outline:

Measurements and Calculations

Modern Atomic Theory

Matter

Energy

Chemical Foundations Elements Atoms and Ions

Nomenclature

Chemical Reactions

Bonding

Gases

Liquids and Solids

Solutions

Acids and Bases

Equilibrium

REDOX Reactions

Course Expectations:

Supplies:

Each student is expected to have 1 binder and one composition book. **A scientific calculator (can be checked out from the library) of your own is required.** NO SHARING OF CALCULATORS IS ALLOWED ON EXAMS.

Absences

If you are absent and need to make up a lab/test/or presentation, the assignment can be made up during tutorial or with another instructor if you have a free period when they offer chem. Labs will be offered after the tutorial period following lab, usually within 1 week, unless other arrangements have been made.

Exams

Tests will be every chapter and will include a variety of multiple choice, vocab, essay, and calculation questions. In case of absence, tests can be made up during tutorial or free periods. Any test, or lab submitted on-time, can be corrected for a maximum score of 80%. (½ point will be earned for every corrected point) Chemistry is cumulative, and tests should be corrected before the next test is taken, but can only be corrected until end of the quarter.

Homework

All classwork and homework assignments will be completed in a binder on the handouts provided. Your homework grade will come from in-class quizzes. **Homework can be used on these quizzes** so completing the homework (on your own) will be of great value. In addition to exams, pre-assessments will be delivered before key units.

Late Assignments

Students are considered late if they are not in their seats by the time the bell rings. Assignments are expected to be turned in on time.

Behavior

Because this is a class that will integrate lab activities, it is especially important for students to be on their best behavior. Safety is a major concern for every student in the class. Respect for your classmates is expected of you. Disrespect of any kind for another student or their belongings will not be tolerated. If students are found goofing off or exhibiting horseplay in the lab, they will be immediately removed from the lab and they will be required to attend tutorial to make up the lab. Labs are only available for makeup until the end of the following week. Academic honesty is expected of students at all times. Any student caught cheating will receive an automatic zero on the assignment and referred to the vice principal.

CELL PHONE POLICY:

Cell phones will only be allowed for instructional purposes! If I see your phone during a “technology away” time, I send it to Jill. You will not be able to retrieve it until the END OF THE DAY.

Grading

Quizzes	10 %
Current Events	10 %
Lab and Safety Procedures	5 %
Exams/Labs/Projects	75 %

Standards & Expected Proficiencies

To provide a guaranteed and viable curriculum to all students, this course is aligned with Next Generation Science Standards (NGSS) HS-PS1 (Matter and its Interactions):

HS-PS1-1 Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.

HS-PS1-2 Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.

HS-PS1-3 Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.

HS-PS1-4 Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.

HS-PS1-5 Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.

HS-PS1-6 Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.

HS-PS1-7 Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.

HS-PS1-8 Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay.

Differentiation and Accessibility

The Franklin High School Chemistry team is committed to providing equitable access to curriculum and experiences to ALL students, with a focus on supporting traditionally underserved student populations. Because this is chemistry for all, in an effort to provide an equitable learning experience, students will be allowed to use a percentage of their grade to access a scaffolded version of the assignment. Students with accommodations and/or modifications will receive assignments in accordance with their IEP or 504.

(1) Students may agree to a maximum score of 90% of an exam grade to have access to a pre-filled note sheet during the exam.

(2) Students may agree to a maximum score of 90% of a lab write-up grade to have access to a fillable lab write-up, including sentence starters.

Honors Option

Students are eligible for honors credit if the following criteria are met...

- Student has never exhibited academic dishonesty
- Student completes a poster board to accompany their science fair project by the end of first semester
- Student chooses unscaffolded test and lab options (Does not apply to students with accommodations for scaffolded assignments).

Parent/Guardian Signature: _____ Date: _____

Student Signature: _____ Date: _____

**Science Safety Agreement
Franklin High School**

Chemistry — Mr. Stroup

Science is a hands-on laboratory class. Many laboratory activities require the use of hazardous chemicals, materials, and equipment. Safety in the science classroom is the number one priority for students, teachers, and parents. To ensure a safe science classroom, a list of rules has been developed and provided for you in this science safety agreement. These rules must be followed at all times! Please read through these rules carefully. After reviewing the rules, please have the agreement signed by both you and a parent or guardian and return to your science instructor.

General Safety Guidelines

- Perform only those experiments and procedures authorized by the instructor.
- Be properly prepared to conduct all experiments. Pay attention to laboratory safety instructions and be sure you understand what you are doing before you proceed.
- Conduct yourself in a responsible manner at all times. No horseplay, or other fooling around should ever occur in the laboratory.
- Wear proper eye protection at all times during laboratory activity as directed by the instructor. Additional safety equipment may be required by the instructor.
- Know the locations of fire extinguisher, fire blanket, eyewash, safety shower, and first aid kit. Emergency exits and aisles must be kept clear at all times.
- Confine or securely tie hair that reaches to the shoulders. Wear clothing appropriate to the laboratory as specified by the teacher.
- Do not eat food, drink beverages, or chew gum in the laboratory area.
- Work areas and equipment should be kept clean and tidy at all times. Bring only materials specified by your instructor to the work area. Other items such as books, purses, backpacks, etc. must be stored in an area designated by the instructor.
- Dispose of all waste materials in an appropriate manner as designated by the instructor.
- Read chemical labels very carefully. Make sure that you have the correct substance in the correct concentration. Check the label twice before removing any of the contents. Follow the instructor's safety instructions for handling hazardous materials.
- Do not return chemicals to their original containers unless you are specifically instructed to do so.
- Always work in a well-ventilated area when using volatile substances or hazardous vapors.
- Handle all chemicals with care. Never taste a chemical. Never draw material in a pipette by mouth. Check odors when instructed to do so by gently wafting some of the vapor toward your nose by hand.
- Never take chemicals, supplies, specimens, or equipment out of the laboratory without the knowledge and consent of the instructor.
- Never work alone in the laboratory without adult supervision.
- Do not enter the laboratory stockroom(s) or storage areas without specific permission from your instructor.
- Transport chemicals, materials and equipment properly as directed by the instructor.
- Human body fluids pose potential dangers and can only be used under strict teacher supervision.

Content Area or Teacher Specific Safety Guidelines

- Never point the open end of a test tube being heated at yourself or others.
- Always protect the balance pans when weighing chemicals. If you spill material clean it up immediately.
- Never return chemicals to the original stock bottles.
- Be aware of the environmental impact of lab practices.

Accidents and Injuries

- Report any accident (spill, breakage, etc.) or injury (cut, burn, etc.) to the instructor immediately.
- Water spills on the floor need to be cleaned up immediately.
- If a chemical should splash in your eye(s) or on your skin, immediately flush with running water from the eye wash station or safety shower for at least 15 minutes. Notify the instructor immediately.
- Treat burns immediately by putting the burned area under cold water.

THE PURPOSE OF THE AGREEMENT IS TO MAKE THE STUDENT AWARE OF HIS/HER RESPONSIBILITY FOR LABORATORY SAFETY!

I will:

- Follow all instructions given by the teacher
- Protect eyes, face, hands, and body when involved in science experiments.
- Carry out good housekeeping practices and keep my laboratory work area neat and orderly.
- Know the location of first aid, eyewash and fire extinguisher.
- For my own safety and the safety of others, conduct myself in a responsible manner at all times.
- Report potentially hazardous conditions and behaviors.

I, _____, have read and agree to follow all the safety guidelines set forth. I will closely follow all instructions provided by the teacher.

I have read and understand the expectations and consequences for General Chemistry.

I understand my student needs a composition notebook, a binder and a scientific calculator by the 30 (A) and 31 (B) of August.

I understand cell phones will only be allowed for instructional purposes and must be kept away at all other times..

I understand my student should advocate for themselves and get help as much as possible (if needed).

Date _____ Student Signature _____

Date _____ Parent Signature _____

List of allergies or other medical problems that could endanger my safety in the laboratory.

- 1.
- 2.
- 3.
- 4.
- 5.