

Chemistry Syllabus

Washburn High School
Minneapolis, MN

2020/2021 School Year

Angela Osuji, PhD. Room 137 Phone: 612-668-3400 Voice mail: 612-668-7621

E-mail: Angela.Osuji@mpls.k12.mn.us

After School Availability: Every Day from 3:15 – 5:00 PM or by appointment except on Meeting Days.

Course Description

Chemistry is a natural science that involves the study of Matter, Energy and the interactions. The Chemistry course is an inquiry-based course in which students demonstrate understanding of the practices, cross cutting ideas and disciplinary core of science by investigating and analyzing matter, energy and their interactions. The course will focus on the practices of science and engineering, the cross-cutting ideas and the disciplinary core concepts.

The course employs a conceptual approach to learning chemistry. This approach engages students with analogies and imagery from real-world situations to build a strong conceptual understanding of physical principles ranging from classical mechanics to modern chemistry. With this strong conceptual foundation, students are better equipped to understand the equations and formulas of chemistry, and to make connections between the concepts of chemistry and their everyday world.

Textbooks

Chemistry: Matter and Change (2013) by Glencoe Science, McGraw-Hill

Course-at-a-Glance

Semester 1

Quarter 1 *Unit 1: Introduction to Matter (6 weeks)* *Unit 2: Atomic Theory (3 weeks)*

Quarter 2 *Unit 3: Chemical Relationships (6 weeks)* *Unit 4: Chemical Quantities (3 weeks)*

Semester 2

Quarter 3 *Unit 5: Chemical Reactions (3 weeks)* *Unit 6: Stoichiometry (4 weeks)*

Unit 7: Properties of Gases (2 weeks)

Quarter 4 *Unit 8: Solutions, Acids and Bases* *Unit 9: Kinetics and Equilibrium (4 weeks)*

Unit 10: Nuclear Chemistry (2 weeks)

Sample Questions: *Where do all the different elements come from? Why do we use gasoline for energy? How can we get energy to flow from one place to another? How and where do we get the materials we need?*

In your textbook, this corresponds to

Quarter 1 – Chapters 2,3, 4, 5, 6, 10 and 12	Quarter 3- Chapters 9, 11, 13
Quarter 2 - Chapters 6, 7,8,10	Quarter 4 - Chapters 14, 18, 16, 17, 24

Additional resources are included in the class website-

Supporting Documents

A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas:

http://www.nap.edu/catalog.php?record_id=13165

A. Science Practices:

1. Asking questions (for science) and defining problems (for engineering)
2. Developing and using models
3. Planning and carrying out investigations
4. Analyzing and interpreting data
5. Using mathematics and computational thinking
6. Constructing explanations (for science) and designing solutions (for engineering)
7. Engaging in argument from evidence
8. Obtaining, evaluating, and communicating information

B. Science Crosscutting Concepts:

1. Patterns
2. Cause and effect: Mechanism and explanation
3. Scale, proportion, and quantity
4. Systems and system models
5. Energy and matter: Flows, cycles, and conservation
6. Structure and function

7. Stability and change

C. Disciplinary Core Ideas: Physical Sciences:

1. PS1: Matter and its interactions
2. PS2: Motion and stability: Forces and interactions
3. PS3: Energy
4. PS4: Waves and their applications in technologies for information transfer

Method of Instruction

This will include demonstrations, inquiry as well as guided inquiry, lectures, projects, field studies, cooperative learning activities, and individual work. Available technology will be integrated as much as possible.

Homework and Assignments

Homework is assigned everyday and is due on time on the due date. The student's name and assignment will be written on the upper right corner of the paper. All work must be described and explained in detail including all necessary procedures (show your work).

All class works are due on the same day they are assigned unless otherwise instructed. All lab works are **due 2 days after the lab is done.** You will have weekly quizzes and biweekly tests. All projects are due on the assigned date.

Late work earns zero points. You will be given adequate time to do the work and turn it in for grading.

Late Work: In order to ensure we have adequate time for reviewing student work, **once the assignment is graded and returned to students, that assignment is completed.** No late work will be accepted. At all times, any work turned in one week after the due date **under any circumstance** is very late.

Extra credit points are embedded in assignments. No additional extra credit point will be given.

Test Retakes: You may retake a test once. The retake must be completed within one week of receiving the original test back. There will be a final exam - you may not retake the final exam. If a retake is done, that score will be used in the gradebook (most recent score, not the BEST score). **Students with 504 or Individualized Education Plans (IEPs) will have grading parameters adjusted as stipulated in these plans.**

Make Up Workdays/Office Hours

I will be available after school on each **Tuesdays and Thursdays from 3:15-4:15 pm** to assist with questions on homework, projects and general class content. If you have an excused absence, you have one day upon returning to class to make up any work you are missing.

Lab materials are discarded after one week and new materials may not be available for any make up labs, so be present always so as not to miss any labs.

Breakdown of Grade/Grade Make-Up

You and your parents can keep track of your grades through the classroom for success and the parent portal. If you have a question or concern about your grades, feel free to contact me so that we can address them before it is too late. I prefer that you contact me after class or after school or by email. Remember it is YOUR grade and so is your responsibility.

Assignments are awarded points based on the difficulty indices and cognitive level of the assignment and weighted based on the category. Table below is provided as a guide:

Experimental and Theoretical Practice (30%)	Experimental and Theoretical Mastery (70%)
This includes Classwork and Homework assignments, writing prompts, warmups, and Exit tickets.	This includes but not limited to quizzes and tests, labs and lab write ups, projects.

Grading Scale:

Letter grades will be assigned to the following percentage of points earned:

A = > 90 % B = 80 – 89.9 % C = 70 – 79.9 % D = 60 – 69.9 % F = < 60 %

Plusses (+) and minuses (-) are given in the top and bottom three percent of each range, respectively. For example: 71.9 % = C- 78.2% = C+

Classroom Procedures

You will

- Be on time for class and participate in class activities every day. Be seated before the final bell rings.
- Come prepared for class every day – bring **required** materials to class including **calculators, 3-ring binder and notebook, ruler, pens and pencils.**

- Do all assigned work to the best of your ability (Your effort at doing the work should be clearly visible).
- Work together cooperatively I your groups when assigned to do so and clean up your workspace at the end of the day.
- Formulate and ask questions, practice active listening.
- Be as understanding as possible.

I will

- Come prepared to each every day.
- Help you learn Chemistry to the best of my ability.
- Be available outside of class period for questions or help.
- Be as understanding as possible and bring a positive attitude to class.

Rights

You have the right to

- Be treated with respect by EVERYONE in this class.
- Work in an environment that is conducive to learning.
- Professional instruction from me (your teacher) and other instructors who may be in class.

I have the right to

- Be treated with respect by you and everyone in the class.
- Teach in an environment that is conducive to teaching.
- Expect the most from you and all my students.
- Enforce all classroom, school and district rules, policies and procedures.

Classroom Policies

You will

- Follow all Washburn High School and Minneapolis Public school rules **including the use of electronic devices.**
- Maintain the academic integrity of the subject and the school.

- Be respectful at all times.
- Sign the safety contract with your parents before you participate in lab work.
- Observe all **Safety procedures** –for your safety and the safety of others – Failure to do so will result in your removal from class.

Behavioral Expectations	Benefits	Consequences
Come to class prepared to learn	- Learning something new. - Earn good grades - Be and Feel Successful	- Lose points. - Earn bad grades. - -Be and feel unsuccessful.
Respect -You and your property. -Other people and their property. -School, District and community.	-Increase integrity and self-worth. -Earn respect.	- Redirection -Change Seat -Sent to the Dean -Removal from class. -Parent Conference.
Observe all Safety Procedures.	-Avoid accidents. -Do Lots Experiments. - Experience the fun in Physics.	-Warning -Loss of lab opportunity. -Parent Conference.

Signature

By signing below, the student and parent(s) indicate that they have read and approved the syllabus. Use the space below for comments.

Student Name _____ Date _____

Parent(s) Signature _____ Date _____

Common WHS Chemistry Syllabus