

6 C Carbon 12.0107	2 He Helium 4.002602	25 Mn Manganese 54.938045	53 I Iodine 126.90447	16 S Sulfur 32.065	69 Tm Thulium 168.93421	86 Rn Radon [222]	39 Y Yttrium 88.90585
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Stanberry High School Chemistry Syllabus 2021-2022

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Welcome to Chemistry!

I. Course Description

Chemistry is an introductory course preparing the student for further studies in chemistry in college. It is directed toward explaining the composition of matter. Emphasis is placed on chemical principles and their application, problem solving, and the development of laboratory skills.

Course Curricular Objectives

The Chemistry course at Stanberry High School is vitally important in helping students experience the richness and excitement of knowing about and understanding the natural world.

1. Conduct laboratory and field investigations while using scientific methods and demonstrating safe practices;
2. Make informed decisions using critical thinking and scientific problem solving within and outside the classroom;
3. Analyze the relationships between chemical and physical changes and properties;
4. Understand the historical development of the Periodic Table and apply its predictive power;
5. Know and understand the historical development of atomic theory;
6. Know how atoms form ionic, metallic, and covalent bonds;
7. Quantify the changes that occur during chemical reactions;
8. Understand the principles of ideal gas behavior, kinetic molecular theory, and the conditions that influence the behavior of gases;
9. Understand and apply the factors that influence the behavior of solutions;
10. Understand the energy changes that occur in a chemical reaction;
11. Understand the basic process of nuclear chemistry

II. Course Materials and Preparation

We will use Google Classroom as our learning platform on which announcements and most assignments will be posted. We will be using the book *World of Chemistry* by Zumdahl. The students will also be provided with other materials that review or enrich the content presented in class. In addition, students are expected to bring a **three ring binder** to organize all class notes or handouts, **loose-leaf notebook paper**, and a pen or pencil to class every day. A set of calculators will be provided for use in the classroom. You also need to purchase a **wide-ruled composition book** for lab reports.

Students who review notes and complete assignments daily and take advantage of retakes when available are most successful. Students need to be proactive and communicate with their teacher when they are confused or struggling.

III. Course Policies and Procedures

A. Behavior: Students will respect the rights of others in the classroom, and the school's equipment and facilities. All

students will be required to pass a safety quiz and return a signed safety contract (student and guardian) in order to participate in labs. It is a privilege to do labs. They help to make learning meaningful, fun and exciting. For safety reasons, a student who behaves inappropriately during labs will not be allowed to finish the lab. If horseplay is involved, the student potentially endangers other students in class and will be referred to the office.

B. Absences: Daily attendance is **strongly recommended** in this course (and all other courses). Make-up privileges will be as follows:

- If you are **absent due to a school function** (extracurricular activities, field trips, etc.), you are expected to get your assignments **PRIOR** to your leave and complete them by the due date. It will be your responsibility to come in for any additional help as needed before/after school to get the work done on time.
- If you have an **Excused** absence, (not due to a school function), you are expected to see the teacher **before or after school on the day you return** to pick up all make-up work. Do not expect assignments to be given to you during valuable class time. The rule for any make-up work is if you miss one day, you will have two nights to make up the homework. If you miss two days of class, you will be given three days to make up the work and so on. Credit for make-up work will be allowed for excused absences. However, if a student is **unexcused** they will not receive any credit for make-up work relating to the day they were unexcused.

C. Homework Policy: Students will be given homework assignments to practice their skills. These assignments are crucial for students to expand their understanding, and will give both teacher and student an opportunity to check comprehension of the material before moving on. Homework assignments will be discussed and checked the next day in class, giving students the opportunity to ask questions to further increase their understanding. Homework is due at the start of the class period. Scoring on homework will be as follows:

- 4 All of the assignment is complete, and a **legitimate** attempt is shown on every problem
- 3 Most of the assignment has been attempted, but a few problems are missing
- 2 Half of the assignment is complete
- 1 One fourth of the assignment is complete
- 0 No homework assignment is turned in.

Late homework will be accepted from a unit until the unit test is taken. Any missing assignments will become a zero the day of the test. Late homework is automatically worth half credit, implying that if homework would have been worth a score of 4, it now receives a score of 2.

D. Testing and Retake Policy: Make-up and retakes tests or quizzes will be given at a time arranged with your teacher. If you miss the day before the test or quiz, you will be expected to take the test or quiz on the scheduled date. Students will have the option to retake the test or quiz if their score is below 70%, and provided all homework for the unit has a score of "4." The retake must be completed prior to the next test, and the second test or quiz will be recorded in the gradebook up to an 70%. Before the retake, each student must schedule and attend a study session with your teacher.

E. Lab Policy: Students are expected to do all lab activities. If a student is absent, he/she must come in the day they return and schedule a time to make-up the lab. All students are required to keep a Lab Notebook. Students must record the **purpose, procedure, safety precautions, and data tables** in their Lab Notebook **prior** to coming to lab.

F. Academic Dishonesty: Cheating on tests or homework will result in:

- A zero grade for the entire test or assignment.
- Parental notification if caught cheating on a test or assignment
- Notification to the principal if caught cheating on a test.

G. Technology: Electronic devices will be used for academic purposes only. **The Cell Phone Policy will be strictly enforced.**

IV. Grading Policy/Assessment

A. Grading Scale

96-100	A	73-76	C
90-95	A-	70-72	C-
87-89	B+	67-69	D+
84-86	B	63-66	D
80-83	B-	60-62	D-
77-79	C+	Below 60	F

V. Course Procedures

- Students need to be in their seats when the bell rings and begin working on the daily opener question.
- Chemistry class is to be used for the study of chemistry. You will not be allowed to work on homework from any other class unless your chemistry work is complete. Any homework from other classes that is out when you should be working on chemistry will be confiscated.
- Daily participation in chemistry is expected. We do a lot of calculations and problems together as a class. If you do not participate, your grade will suffer.
- Labs need to be cleaned up appropriately before the end-of-class bell rings. No late passes will be written. There should be no used paper towels or lab materials left on the floor or counters, the sinks and strainer should be clean, and lab equipment returned to the proper place.
- Students must be in their seats at the end of class in order to be dismissed. The teacher will dismiss the students, not the bell. **You will NOT be permitted to line up at the door before the end of class.**

VI. Communication Statement

My intent is to help all students be successful and to facilitate a positive learning environment. I am easy to get along with, but I have high expectations for all of my students. I will not accept anything less than your best and you shouldn't either. I am at school by 7:30 a.m. and stay until at least 4:30 p.m.; I am willing to stay later if a student needs help. Don't hesitate to ask for help or to discuss grades! Communication is key.

I provide students with printed and highlighted grade reports per unit, indicating progress and missing work. Lumens is updated weekly. Please feel free to contact me by email anytime or by phone before or after school.

The course code for Google Classroom is _____. Please refer to daily announcements for practice, notes, classwork and homework.

VII. Contact Information

I arrive at school by 7:30 and stay until 3:45. You and your parents are welcome to contact me via the school phone at 783-2163 or by email rhoover@stanberryschools.org.

CHEMISTRY 2020-2021

Student and Parent
Signature Form:

I _____ (student
name),

have read and understand the course expectations, prerequisites, recommendations

and policies outlined in this syllabus. My signature indicates that I will use classroom
resources

with respect and understand and will comply with course policies as I put forth my best efforts to

be successful in this
class.

I _____ (parent
or

guardian), have read and understand the course expectations, prerequisites,
recommendations

and policies outlined in this syllabus.

VIII. Units of Study (Units of Study may be adapted at the discretion of the instructor)

Units:	Time
Introduction (Expectations, Guidelines, Safety)	3 days
Unit 1: Matter & Change <ul style="list-style-type: none">● Chemistry as a physical science● Matter & its properties● Elements and Intro to the PeriodicTable	1 week
Unit 2: Measurements & Calculations <ul style="list-style-type: none">● Scientific Method● Units of Measure● Using Scientific measurements	1 week
Unit 3: Atomic Structure <ul style="list-style-type: none">● The Atom (philosophy to theory)● Structure	1 weeks
Test #1	
Unit 4: Electron Arrangement <ul style="list-style-type: none">● New atomic model● Quantum model● Atomic Spectra & Electromagnetic spectrum	2 weeks
Unit 5: The Periodic Table <ul style="list-style-type: none">● History● Trends/Properties● Electron configurations	2 weeks
Test #2	
Unit 6: Chemical Bonding <ul style="list-style-type: none">● Ionic Bonding● Covalent Bonding● Metallic Bonding● Molecular Geometry	4 weeks

Test #3

Unit 7: Chemical Formulas & Compounds

4 weeks

- Chemical Names, Formulas & Equations
- Using Chemical Formulas
- Determining Chemical Formulas
- Types of Reactions

Test #4

Unit 8: The Mole & Stoichiometry

4 weeks

- The mole
- Stoichiometric calculations
- Limiting Reactants & % Yield
- Heat Transfer

Test #5

Unit 9: States of Matter & Gas Laws

2 weeks

- Characteristics of Matter
- Gas Laws

Unit 10: Solution Concentrations & Solubility

4 weeks

- Properties of water
- Solubility
- Molarity
- Molality
- Chromatography

Test #6

