

# Syllabus & Pacing

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## 1.) Syllabus

### **COURSE DESCRIPTION**

Chemistry is the study of matter. In this course, you will study the following topics:

- Structure and characteristics of atoms.
- The organization of the periodic table.
- Compounds and their properties.
- Chemical Reactions
- Solutions

Within each unit, there are a number of lessons. Quizzes or assignments are designed to assess your understanding of an individual lesson. Tests are designed to assess your understanding of the unit as a whole.

Most units contain a lab activity. Some of these are digital simulations, but others use classroom-safe materials. The goals of lab activities in this course is to collect and interpret data to further your understanding of the concepts.

### **COURSE SUBMISSIONS**

All assignments will be graded through OnFire. Any attachments must be made in a Word document file, PDF, or Google Doc shareable link and turned in through OnFire or directly to the instructor.

### **COURSE MATERIALS**

All courses require you to have access to a working computer and to the Internet.

Students will need access to a printer, scissors, paper, and a pencil to complete labs or activities during this course.

All course work will be completed and graded through a digital learning management system known as Onfire.

### **INSTRUCTOR EXPECTATIONS AND PACING**

A typical semester course at a traditional high school requires 80 hours in total, which is 40 hours per term. Since this is a self-paced course, completing it may take you longer or shorter. You are expected to spend 3-5 hours each week and submit at least one unit each.

Students can complete the course at a pace that best suits them. You are responsible for completing and turning in all assignments according to their individual needs. However, make sure to look at your school's deadlines, to ensure that you are completing courses on track.

Parents/Guardians can observe and view their student's progress through OnFire.

### **ONLINE TECHNOLOGIES**

This course takes place online. Since we will not meet face-to-face, you must have the necessary technology and technical know-how to work effectively in this online learning environment. This online course will utilize OnFire as the learning management system. Please get in touch with your instructor if you have trouble logging in or viewing any of the documents and links posted.

## 2.) Grade Breakdown

### Grading Procedures

A 94-100%	C 73-76%
A- 90-93%	C- 70-72%
B+ 87-89%	D+ 67-69%
B 83-87%	D 63-66%
B- 80-82%	D- 59-63%
C+ 77-79%	F 58% or below

### Grade Weight Groups:

- Quizzes: 30%
- Post-Assessment: 15%
- Tests: 15%
- Assignments and Labs: 40%

Parents/Guardians will be able to observe and view their student's progress through Onfire.

## 3.) Pacing Guide

### Tentative Course Schedule

#### Term 1

Week 1	Unit: Thinking Like A Scientist <input type="checkbox"/> Safety Contract <input type="checkbox"/> Lesson and QUIZ: Significant Figures <input type="checkbox"/> Lesson and QUIZ: Scientific Notation
Week 2	Unit: Thinking Like A Scientist <input type="checkbox"/> Lesson and QUIZ: Creating and Interpreting Graphical Data <input type="checkbox"/> Project: Interpreting Graphical Data—Air Quality Project Unit: Atomic Structure <input type="checkbox"/> Lesson and QUIZ: History of Atoms
Week 3	Unit: Atomic Structure <input type="checkbox"/> Lab: Gold Foil Simulation <input type="checkbox"/> Lesson and QUIZ: Protons, Neutrons, and Electrons <input type="checkbox"/> Lesson and QUIZ: Niels Bohr and Electron Energy Levels

Week 4	<p>Unit: Atomic Structure</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Lesson and QUIZ: Protons, Neutrons, and Electrons in Atoms</li> <li><input type="checkbox"/> Lesson and QUIZ: Atomic Number and Atomic Mass</li> </ul>
Week 5	<p>Unit: Atomic Structure</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Unit Test: Structure of Atoms</li> </ul> <p>Unit: Radioactivity</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Lesson and Activity: Nuclear Stability Activity</li> </ul>
Week 6	<p>Unit: Radioactivity</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Lesson and Quiz: Carbon Dating</li> <li><input type="checkbox"/> Lab: Half-Life</li> </ul>
Week 7	<p>Unit: Radioactivity</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Lesson and Quiz: Types of Radioactive Decay</li> <li><input type="checkbox"/> Lesson: Uses and Risks of Nuclear Decay</li> <li><input type="checkbox"/> Assignment: Nuclear Energy Research</li> </ul>
Week 8	<p>Unit: Radioactivity</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Unit Test: Radioactivity</li> <li><input type="checkbox"/> Term 1 Post-Assessment and Grade Submission</li> </ul>

## Term 2

Week 1	<ul style="list-style-type: none"> <li><input type="checkbox"/> Unit: The Periodic Table</li> <li><input type="checkbox"/> Lesson and QUIZ: Mendeleev</li> <li><input type="checkbox"/> Lesson and QUIZ: Groups in the Periodic Table</li> </ul>
Week 2	<p>Unit: The Periodic Table</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Assignment: Missing Cousin Lab</li> <li><input type="checkbox"/> Lesson and QUIZ: Metals, Non-Metals, and Metalloids</li> <li><input type="checkbox"/> Unit Test: The Periodic Table</li> </ul>
Week 3	<p>Unit: Electrons in Atoms</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Lesson and QUIZ: Valence Electrons</li> <li><input type="checkbox"/> Lesson and QUIZ: Ions</li> <li><input type="checkbox"/> Lesson and QUIZ: Ionic and Covalent Bonds</li> </ul>

Week 4	<p>Unit: Electrons in Atoms</p> <p><input type="checkbox"/> Unit Test: Electrons in Atoms</p> <p>Unit: Ionic Compounds</p> <p><input type="checkbox"/> Lesson and Quiz: Chemical Formulas</p>
Week 5	<p>Unit: Ionic Compounds</p> <p><input type="checkbox"/> Lesson and Quiz: Names and Formulas of Ionic Compounds</p> <p><input type="checkbox"/> Lesson and Quiz: Transition Metals</p> <p><input type="checkbox"/> Lesson and Quiz: Polyatomic Ions</p>
Week 6	<p>Unit: Ionic Compounds</p> <p><input type="checkbox"/> Unit Test: Ionic Compounds</p> <p>Unit: Covalent Compounds</p> <p><input type="checkbox"/> Lesson and Quiz: Names and Formulas of Covalent Compounds</p> <p><input type="checkbox"/> Lesson and Assignment: Lewis Dot Structures</p>
Week 7	<p>Unit: Covalent Compounds</p> <p><input type="checkbox"/> Lesson and Quiz: Molecular Geometry</p> <p><input type="checkbox"/> Lesson and Quiz: Polarity</p> <p><input type="checkbox"/> Lesson and Quiz: Intermolecular Forces</p>
Week 8	<p>Unit: Covalent Compounds</p> <p><input type="checkbox"/> Unit Test: Covalent Compounds</p> <p><input type="checkbox"/> Term 2 Post-Assessment and Grade Submission</p>