



EVOLVE THROUGH KNOWLEDGE

Cd. Juárez, México

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THE DARWIN INSTITUTE

EVOLVE THROUGH KNOWLEDGE

HIGH SCHOOL CHEMISTRY

FIRST SEMESTER COURSE SYLLABUS

August-December 2026

Primary Textbook

Glencoe Chemistry: Matter and Change
Glencoe/McGraw-Hill

Course Start: August 31, 2026

First Semester Course

Cd. Juarez, Chihuahua, Mexico

Course Information

Course	Chemistry
Term	First Semester Only
Academic Period	August-December 2026
Primary Textbook	Glencoe Chemistry: Matter and Change
Instructor	TBD
Class Schedule	TBD
Laboratory Schedule	TBD
Room / Learning Platform	TBD

Course Description

Chemistry is a first-semester High School laboratory science course designed to introduce students to the fundamental principles of matter, measurement, atomic structure, periodicity, bonding, chemical reactions, the mole concept, and introductory stoichiometry. Glencoe Chemistry: Matter and Change serves as the primary textbook. Instruction may include lectures, problem solving, laboratory investigations, demonstrations, simulations, scientific writing, and supplementary resources selected by the instructor.

Course Objectives

- Apply scientific methods, measurement, SI units, significant figures, dimensional analysis, graphing, and data analysis.
- Describe matter and distinguish physical and chemical properties and changes.
- Explain atomic structure, isotopes, electron arrangement, and basic atomic theory.
- Interpret the periodic table and explain major periodic trends.
- Differentiate ionic, metallic, and covalent bonding and represent common chemical compounds.
- Write, classify, and balance chemical equations.
- Use the mole concept, molar mass, formulas, and introductory stoichiometric relationships.
- Conduct laboratory work safely and communicate observations, calculations, and conclusions accurately.

Required & Supplementary Materials

- Glencoe Chemistry: Matter and Change.
- Dedicated Chemistry notebook or laboratory notebook.
- Binder or folder for handouts, problem sets, and laboratory reports.
- Scientific calculator.
- Pens, pencils, ruler, graph paper, and standard classroom supplies.
- Safety goggles and other protective equipment when directed.
- Periodic table, formula sheets, reference tables, and teacher-provided laboratory materials.
- Additional articles, worksheets, simulations, videos, virtual labs, review resources, digital platforms, and other supplementary materials: TBD.

Laboratory Safety

Laboratory safety is an essential part of this course. Students must follow all teacher instructions, posted procedures, safety rules, and equipment requirements. Unsafe behavior, unauthorized experiments, misuse of chemicals or equipment, horseplay, food or beverages in restricted areas, or failure to wear required protective equipment may result in removal from the activity and additional consequences consistent with school policy.

Specific laboratory safety procedures, agreements, make-up laboratory expectations, and consequences are TBD and will be communicated by the instructor.

Testing Period Policy

Testing Periods are regular instructional weeks. Students attend class as scheduled while completing examinations. Chemistry instruction, laboratories, assignments, readings, review, and classroom activities may continue during these weeks. Testing Periods are included in the course pacing and are not considered weeks without instruction.

The exact examination day, format, duration, calculator policy, reference materials, and final content coverage within each Testing Period are TBD and will be communicated in advance.

Academic Expectations, Consequences & TBD Policies

- Students are expected to attend regularly, arrive prepared, participate appropriately, complete work by established deadlines, and follow all laboratory safety requirements.
- Students must show required mathematical work, units, and appropriate significant figures.
- Academic dishonesty, plagiarism, copied calculations or laboratory data, fabricated data, unauthorized collaboration, or unauthorized use of AI/online answer services may result in academic consequences.
- Artificial Intelligence may be permitted only when explicitly authorized by the teacher; acceptable and prohibited uses are TBD by assignment and school policy.
- Policies for late work, missed laboratories, make-up work, missed examinations, corrections, reassessments, retakes, participation, and specific classroom consequences are TBD and will follow The Darwin Institute policies.

First Semester Course Pacing

This pacing plan begins on August 31, 2026 and is designed only for the first semester. Testing Periods remain instructional weeks. Chapter pacing may be adjusted according to student progress, laboratory needs, school events, and teacher judgment.

Dates	Unit / Chapter	Topics & Activities
Aug. 31-Sep. 4	Chapter 1 - Introduction to Chemistry	Chemistry and matter; scientific methods; branches of chemistry; laboratory safety; diagnostic activities
Sep. 7-11	Chapter 2 - Analyzing Data	Measurement; SI units; scientific notation; significant figures; accuracy and precision; graphing; dimensional analysis
Sep. 14-18	Chapter 3 - Matter: Properties and Changes	Physical and chemical properties; physical and chemical changes; mixtures; elements and compounds
Sep. 21-25	Testing Period + Regular Classes	Exam 1 + continued Chapter 3 instruction, problem solving, or laboratory work
Sep. 28-Oct. 2	Chapter 4 - The Structure of the Atom	Atomic theory; subatomic particles; isotopes; atomic number; mass number; average atomic mass
Oct. 5-9	Intersession Week	No classes
Oct. 12-16	Chapter 5 - Electrons in Atoms	Electromagnetic radiation; quantum model; orbitals; electron configurations
Oct. 19-23	Chapter 6 - The Periodic Table and Periodic Law	Organization of the periodic table; periodic law; electron configuration; periodic trends
Oct. 26-29	Chapter 7 - Ionic Compounds and Metals	Ion formation; ionic bonding; formulas and names; properties of ionic compounds; metallic bonding
Oct. 30	Teacher Conferences	No classes
Nov. 2	Day of the Dead Holiday	No classes
Nov. 3-6	Testing Period + Regular Classes	Exam 2 + continued Chapter 7 instruction, nomenclature practice, or laboratory work
Nov. 9-13	Chapter 8 - Covalent Bonding	Covalent bonds; naming molecular compounds; Lewis structures; molecular shape and polarity
Nov. 16	Mexican Revolution Day Holiday	No classes
Nov. 17-20	Chapter 9 - Chemical Reactions	Chemical equations; balancing equations; reaction types; evidence of chemical change
Nov. 23-27	Intersession Week	No classes
Nov. 30-Dec. 4	Chapter 10 - The Mole	Avogadro's number; molar mass; mole-particle and mole-mass conversions; percent composition
Dec. 7-11	Chapter 11 - Stoichiometry: Introduction	Mole ratios; basic stoichiometric calculations; limiting reactant and percent yield as time allows
Dec. 14-16	Testing Period + Regular Classes	First Semester Final Examination + continued review, stoichiometry practice, or course activities
Dec. 17-18	Course Closure	Laboratory notebook/portfolio completion, reflection, final make-up work, and course closure - TBD

Suggested Examination Coverage

- Testing Period 1 (Sep. 21-25): Chapters 1-2 and teacher-defined content from Chapter 3.
- Testing Period 2 (Nov. 3-6): Chapters 3-6; Chapter 7 instruction may continue during the same week.
- First Semester Final Testing Period (Dec. 14-16): Emphasis on Chapters 7-10, with cumulative foundational concepts; exact coverage TBD.
- Chapter 11 introductory stoichiometry may be assessed in classwork, quizzes, or the final examination depending on pacing; final determination TBD.

Laboratory & Project Components

- Laboratory safety orientation and safety agreement.

- Measurement, density, significant figures, or data-analysis investigation.
- Matter/properties or separation-of-mixtures investigation.
- Atomic structure, periodic trends, or bonding model activity.
- Chemical reactions and conservation-of-mass investigation.
- Mole or introductory stoichiometry activity/laboratory as time and resources permit.
- Laboratory reports, calculations, data tables, graphs, error analysis, and scientific conclusions.
- Additional laboratory activities, demonstrations, research assignments, or projects: TBD.

Course Adjustments & TBD Items

This syllabus is a working academic guide for the first semester of the 2026-2027 school year. The instructor and The Darwin Institute may adjust pacing, chapter sequence, laboratory activities, assignments, supplementary materials, assessments, safety requirements, and instructional activities according to student progress, laboratory resources, school events, and academic needs. Items identified as To Be Defined (TBD) will be communicated as they are established.

Acknowledgment

I acknowledge receipt of this syllabus and understand that it serves as a guide for the first-semester High School Chemistry course. I understand that pacing, laboratory activities, materials, assessments, policies, safety procedures, and TBD items may be updated or clarified during the semester in accordance with school policy.

Student Name / Signature: _____

Parent or Guardian Name / Signature: _____

Teacher Signature: _____

Date: _____