

Course Overview	Pre-AP Chemistry is a lab-based course studying various aspects of matter including atomic structure, periodicity, bonding, intermolecular forces, gases, solutions, reactions, introductory acid/base theory, and thermochemistry. In addition to the chemistry content, students develop more sophisticated skills of laboratory investigation, qualitative and quantitative analysis, and content-specific problem-solving approaches. Content for this course is meant to push beyond the state standards to bridge the gap between state-tested subjects to AP courses. The curriculum is intentionally designed to make students grapple with rigorous content and build endurance in solving complex, multi-step processes. At least 40% of instructional time should be spent conducting lab and field investigations, and students should have passed Algebra I before enrolling in this course.
Course Standards	Pre-AP Chemistry Course Guide
Instructional Materials	IDEA Pre-AP Chemistry Curriculum is the approved curriculum. Educational technology such as Explore Learning Gizmos, Khan Academy, and PhET simulations are embedded into the core curriculum. The CK-12 Online Interactive Textbook is used as a supplemental resource. Wet labs and the proper facilities to conduct them are required to satisfy both the standards and the 40% lab experience required by the TEA. <ul style="list-style-type: none"> Approved Instructional Materials and Supports

Scope & Sequence

Units/Modules & Instructional Days	Assessments & Scanning Deadlines	Standards
Unit 1: Atomic Structure 13 Instructional Days 1 Exam Review Day 1 Unit Exam Day 1 Success Day Flex Days Vary by Region	TX_SCI_PreAPChemistry_F26_UE1 Scanning Deadline: 9/17/26	<ul style="list-style-type: none"> ➤ 2.1.A.1 Distinguish between atoms, molecules, and compounds at the particle level. ➤ 2.1.A.2 Create and/or evaluate models of pure substances. ➤ 2.1.B.1 Create and/or evaluate models of mixtures. ➤ 2.1.B.2 Interpret the results of an experiment involving the separation of a mixture. ➤ 2.2.C.1 Describe trends in properties of elements based on their position in the periodic table and the shell model of the atom. ➤ 2.2.D.1 Create and/or evaluate Lewis diagrams for molecular compounds and/or polyatomic ions. ➤ 2.3.C.1 Explain the relationship between the relative strength of attractions between cations and anions in an ionic solid in terms of the charges of the ions and the distance between them. ➤ 3.1.A.1 Explain the relationship between the mass of a substance, the number of particles of that substance, and the number of moles of that substance. ➤ 3.1.A.2 Use the mole concept to calculate the mass, number of particles, or number of moles of a given substance.

Units/Modules & Instructional Days	Assessments & Scanning Deadlines	Standards
Unit 2: Periodic Trends 9 Instructional Days 1 Exam Review Day 1 Unit Exam Day 1 Success Day Flex Days Vary by Region	TX_SCI_PreAPChemistry_F26_UE2 Scanning Deadline: 10/8/26	<ul style="list-style-type: none"> ➤ 2.2.C.1 Describe trends in properties of elements based on their position in the periodic table and the shell model of the atom. ➤ 2.2.D.1 Create and/or evaluate Lewis diagrams for molecular compounds and/or polyatomic ions.
Unit 3: Compound Structures and Properties 15 Instructional Days 1 Exam Review Day 1 Unit Exam Day 1 Success Day Flex Days Vary by Region	TX_SCI_PreAPChemistry_F26_UE3 Scanning Deadline: 11/10/26	<ul style="list-style-type: none"> ➤ 1.1.A.1 Create and/or evaluate models that illustrate how the motion and arrangement of particles differ among solids, liquids, and gases. ➤ 1.1.A.2 Describe how the properties of solids, liquids, and gases are related to particle arrangement. ➤ 1.1.A.3 Create and/or evaluate models that illustrate how changes in temperature influence the motion of particles in solids, liquids, and gases. ➤ 1.1.B.1 Justify the choice of equipment used to make a measurement, based on precision. ➤ 1.1.B.2 Record measured values to the proper experimental precision. ➤ 1.2.C.1 Explain the relationship between changes in states of matter and the attractions among particles. ➤ 1.2.C.2 Create and/or interpret models representing phase changes. <i>Note: Particulate diagrams only, not phase change diagrams at this point.</i> ➤ 2.1.D.1 Create and/or evaluate a claim about the types of forces that are overcome during the melting, boiling, and/or dissolving of substances. ➤ 2.1.A.1 Distinguish between atoms, molecules, and compounds at the particle level. ➤ 2.2.A.1 Create and/or evaluate models that illustrate how molecular properties influence the type(s) of intermolecular force(s) present in a substance. ➤ 2.2.A.2 Create and/or evaluate a claim about the type(s), strength(s), and origin(s) of intermolecular forces present in a substance. ➤ 2.2.B.1 Create and/or evaluate a claim that uses relative strength of intermolecular forces to explain trends in the physical properties of substances. ➤ 2.2.D.1 Create and/or evaluate Lewis diagrams for molecular compounds and/or polyatomic ions. <i>Note: Compound Lewis diagrams of any type are new.</i> ➤ 2.2.D.2 Determine if given molecules are structural isomers. ➤ 2.2.E.1 Determine molecular geometry from a Lewis diagram using valence shell electron pair repulsion theory. ➤ 2.2.F.1 Determine the polarity of a molecule from its molecular geometry and electron distribution.

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		<ul style="list-style-type: none"> ➤ 2.2.G.1 Create and/or evaluate a claim about the strength and type(s) of intermolecular forces present in a sample based on molecular polarity. ➤ 2.3.A.1 Create and/or evaluate a claim about the type of bonding in a compound based on its component elements and its macroscopic properties. ➤ 2.3.B.1 Interpret the results of an experiment to determine the type of bonding present in a substance. ➤ 2.3.D.1 Create and/or evaluate representations of ionic and covalent compounds. ➤ 3.1.A.2 Use the mole concept to calculate the mass, number of particles, or number of moles of a given substance. <i>Note: Compound applications of the mole concept are new.</i>
Unit 4: Gases 8 Instructional Days 1 Exam Review Day 1 Unit Exam Day 1 Success Day Flex Days Vary by Region	TX_SCI_PreAPChemistry_F26_UE4 Scanning Deadline: 12/3/2026	<ul style="list-style-type: none"> ➤ 1.1.C.1 Create and/or evaluate particulate and graphical models representing the density of pure substances. ➤ 1.1.C.2 Explain the relationship between the density and the arrangement of particles within a pure substance. ➤ 1.3.A.1 Create and/or evaluate models that illustrate how a gas exerts pressure. ➤ 1.3.A.2 Explain the relationship between pressure in a gas and collisions. ➤ 1.3.B.1 Explain the relationships between the macroscopic properties of a sample of a gas using the kinetic molecular theory. ➤ 1.3.B.2 Create and/or evaluate models that illustrate how a sample of gas responds to changes in macroscopic properties. ➤ 1.3.C.1 Determine mathematically and/or graphically the quantitative relationship between macroscopic properties of gases. ➤ 1.3.C.2 Perform calculations relating to the macroscopic properties of gases. ➤ 2.1.C.1 Relate the total and partial pressure of a gas mixture to the number of particles and their proportions. ➤ 3.1.B.1 Explain the relationships between macroscopic properties of gas samples. ➤ 3.1.B.2 Perform calculations using the ideal gas law. ➤ 3.1.B.3 Create and/or evaluate models based on the ideal gas law.
Semester Exam Window: December 14-18, 2026 Scanning Deadline: January 8, 2027		
Unit 5: Solutions 11 Instructional Days 1 Exam Review Day 1 Unit Exam Day 1 Success Day Flex Days Vary by Region	TX_SCI_PreAPChemistry_F26_UE5 Scanning Deadline: 1/27/27	<ul style="list-style-type: none"> ➤ 1.1.C.1 Create and/or evaluate particulate and graphical models representing the density of pure substances. ➤ 1.1.C.3 Perform calculations relating to the density of pure substances. ➤ 2.1.B.2 Interpret the results of an experiment involving the separation of a mixture. ➤ 4.1.C.1 Create and/or evaluate models that represent the concentration of a solution. ➤ 4.1.C.2 Perform calculations relating to the molarity of solutions.

Units/Modules & Instructional Days	Assessments & Scanning Deadlines	Standards
Unit 6: Reactions 10 Instructional Days 1 Exam Review Day 1 Unit Exam Day 1 Success Day Flex Days Vary by Region	TX_SCI_PreAPChemistry_F26_UE6 Scanning Deadline: 2/17/27	<ul style="list-style-type: none"> ➤ 3.2.A.1 Create and/or evaluate models of chemical transformations. ➤ 3.2.B.1 Explain the relationship between the quantity of reactants consumed and the quantity of products formed in a chemical transformation. ➤ 4.1.A.1 Predict the products of a precipitation reaction. ➤ 4.1.B.1 Create and/or evaluate models of precipitation reactions. ➤ 4.2.A.1 Identify a reaction as an oxidation–reduction reaction based on the change in oxidation numbers of reacting substances. ➤ 4.2.A.2 Create and/or evaluate a claim about which reacting species is oxidized or reduced in an oxidation–reduction reaction. ➤ 4.2.B.1 Predict whether a redox reaction will occur between two reactants using an activity series. ➤ 4.2.B.2 Create and/or evaluate an activity series from experimental measurements. ➤ 4.2.C.1 Create and/or evaluate models of redox reactions.
Unit 7: Stoichiometry 8 Instructional Days 1 Exam Review Day 1 Unit Exam Day 1 Success Day Flex Days Vary by Region	TX_SCI_PreAPChemistry_F26_UE7 Scanning Deadline: 3/10/27	<ul style="list-style-type: none"> ➤ 3.2.B.2 Perform stoichiometric calculations involving the quantity of reactants and products in a chemical system. ➤ 3.2.C.1 Create and/or evaluate models of a reaction mixture before and/or after a reaction has occurred, including situations with a limiting reactant. ➤ 4.1.D.1 Predict the amount of solid produced in a precipitation reaction using gravimetric analysis based on the concentrations of the starting solutions. ➤ 4.1.D.2 Evaluate the results of a gravimetric analysis.
Unit 8: Acids and Bases 9 Instructional Days 1 Exam Review Day 1 Unit Exam Day 1 Success Day Flex Days Vary by Region	TX_SCI_PreAPChemistry_F26_UE8 Scanning Deadline: 4/9/27	<ul style="list-style-type: none"> ➤ 4.3.A.1 Create and/or evaluate models of strong and weak acids and bases. ➤ 4.3.A.2 Distinguish between strong and weak acids in terms of degree of dissociation in aqueous solution. ➤ 4.3.A.3 Evaluate a claim about whether a compound is a strong or weak acid or base. ➤ 4.3.B.1 Explain the relationship between the hydrogen ion concentration and the pH of a solution. ➤ 4.3.B.2 Calculate the pH of a solution. ➤ 4.3.C.1 Predict the products of a reaction between a strong acid and a strong base. ➤ 4.3.D.1 Create and/or evaluate models of a reaction between a strong acid and a strong base.
Unit 9: Energy 13 Instructional Days 1 Exam Review Day 1 Unit Exam Day 1 Success Day Flex Days Vary by Region	TX_SCI_PreAPChemistry_F26_UE9 Scanning Deadline: 5/6/27	<ul style="list-style-type: none"> ➤ 1.2.A.1 Create and/or evaluate a claim about the relationship between transfer of thermal energy and the temperature change in different samples. ➤ 1.2.A.2 Perform calculations using data gathered from a simple constant-pressure calorimetry experiment. ➤ 1.2.B.1 Use data to explain the direction of energy flow into or out of a system. ➤ 1.2.D.1 Create and/or interpret heating and cooling curves and/or phase diagrams of pure substances.

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		<ul style="list-style-type: none"> ➤ 1.2.D.2 Calculate the energy transferred when a substance changes state. ➤ 4.4.A.1 Create and/or evaluate a claim about whether a reaction is endothermic or exothermic from experimental observations. ➤ 4.4.A.2 Explain the relationship between the measured change in temperature of a solution and the energy transferred by a chemical reaction. ➤ 4.4.A.3 Calculate energy changes in chemical reactions from calorimetry data. ➤ 4.4.B.1 Create and/or evaluate a claim about the energy transferred as a result of a chemical reaction based on bond energies. ➤ 4.5.A.1 Construct and/or evaluate particulate representations that illustrate how changes in concentration, temperature, or surface area of reactants alter the rate of a chemical reaction. ➤ 4.5.A.2 Explain how experimental changes in the rate of a reaction are related to changes in the concentration, temperature, or surface area of the reactants.
Final Exam: May 2027 (Windows Vary by Region and TBD by Assessment Team)		

TEKS Alignment

Instruction in this course is aligned to the Texas Essential Knowledge and Skills (TEKS) as adopted by the State Board of Education and implemented in accordance with Texas Education Code Chapter 28.

Instructional Materials

Primary Texts (if applicable)

Supplemental instructional materials may be used to support instruction. Supplemental materials do not replace board-approved core instructional materials.

Additional information regarding instructional programs, assessments, and parent access to instructional materials is available on the district website.

Instructional Expectations

Instruction is delivered using board-approved instructional materials and aligned to the scope and sequence outlined above. Teachers are expected to ensure all required standards are taught within the course timeframe.

Assessment Overview

Student learning is monitored through formative and summative assessments aligned to course standards. Assessment results are used to inform instruction and student supports. Students participate in required state assessments when applicable.