

Regents Chemistry: The Arts and Science of Matter

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Course Overview

This Regents Chemistry course is designed to help students understand the structure, properties, and interactions of matter through hands-on learning, real-world applications, and scientific investigation. Reading, writing, and lab work are closely intertwined throughout the curriculum to strengthen both scientific reasoning and communication skills.

Students will engage in laboratory experiments, modeling, data analysis, and evidence-based writing aligned to the **New York State Physical Setting: Chemistry standards**. Emphasis will be placed on building scientific literacy, problem-solving strategies, and mastery of Regents-level content in preparation for the **June Regents Examination**.

Semester I	Semester II
Marking Period 1 Unit 1: Structure & Properties of Matter Classification of matter, physical and chemical properties, particle diagrams, density, and measurement. Unit 2: Atomic Theory — subatomic particles, atomic models, and isotopes.	Marking Period 4 Unit 6: Energy Heat transfer, endothermic and exothermic reactions, potential vs. kinetic energy, and calorimetry. Lab focus: energy of phase changes.
Marking Period 2 Unit 3: The Periodic Table Periodic trends, metals vs. nonmetals, and organization of the periodic table. Unit 4: Chemical Bonding — ionic, covalent, and metallic bonding, electronegativity, and compound naming.	Marking Period 5 Unit 7: Solutions & Acids/Bases Concentration, molarity, pH, and titration. Unit 8: Kinetics & Equilibrium — reaction rates, dynamic equilibrium, and Le Châtelier's Principle.
Marking Period 3 Unit 5: Chemical Formulas & Reactions Writing and balancing equations, types of reactions, and the Law of Conservation of Mass. Lab focus: identifying reaction evidence and classifying reactions.	Marking Period 6 Unit 9: Oxidation-Reduction & Electrochemistry Unit 10: Organic Chemistry & Nuclear Chemistry Redox reactions, electrochemical cells, organic structures, nuclear decay, and

	half-life. Regents Review & Practice Exams.
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Grading Breakdown

- Note: This **Grading Breakdown is subject to change**

CATEGORY	WEIGHT
Formal Assessments including • Quizzes • Exams • Projects	40%
Tasks and Activities including: • Do Nows/Exit Tickets • Classwork • Homework • Class Participation	30%
Labs	30%